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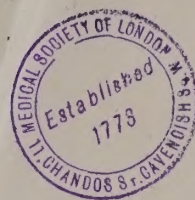
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ROYAL COLLEGE OF
SURGEONS OF ENGLAND

CATALOGUE
OF
THE CONTENTS OF THE MUSEUM
OF
THE ROYAL COLLEGE OF SURGEONS
IN LONDON.



PART IV.
FASCICULUS I.
COMPREHENDING THE FIRST DIVISION OF
THE PREPARATIONS OF NATURAL HISTORY IN SPIRIT.



LONDON:
PRINTED BY RICHARD TAYLOR,
RED LION COURT, FLEET STREET.

1830.

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PLACIDUS I.

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NEW YORK CORSET BELL

1880.

May. 3-6

ADVERTISEMENT.

THE Specimens to which this part of the General Catalogue relates, consist for the most part of entire or undissected animals, and constitute one of the Three Great Divisions of Preparations in Spirit under the Head or Title of NATURAL HISTORY.

This Division originated in the preservation of natural objects transmitted to Mr. Hunter for the purposes of dissection; which, accumulating as the reputation of the illustrious Founder increased and extended, and as the requisite leisure for their examination became abridged, at length enabled him to exhibit in a series the most remarkable differences in the outward forms of the animal kingdom.

It does not appear, however, that they were at any time instrumental in illustrating his opinions of the natural disposition and relations of the several classes of animals; no other conclusion, indeed, could be drawn from their original position, than that they were intended to have been displayed in the Ascending order. It is therefore adhered to in the present arrangement; but the specimens are separated into two groups, and approach the structures of the higher classes by two series; one, leading through Inarticulate animals; the other, through the Articulate or Annulose classes:—a plan which seemed best to accord with the relative position of the several classes of animals, whose structures are displayed in the respective series contained in the Gallery of the Collection.

With a few exceptions, those Classes and Orders are adopted which are characterized in the *Règne Animal* of Cuvier, and in the *Histoire Naturelle des Animaux sans Vertèbres* of Lamarck.

The specimens of the Class TUNICATA are arranged according to the method proposed by Mr. W. S. MacLeay in the 14th volume of the *Linnean Transactions*^a. The ENTOZOA or Intestinal Worms are distributed into the Orders and Genera founded by Rudolphi, and characterized in the *Entozoorum sive Vermium Intestinalium Historia Naturalis*, and in the *Entozoorum Synopsis* of the same author. The arrangement proposed by Dr. Leach in the Supplement to the *Encyclopædia Britannica* has been adopted for the CIRRIPEDES, and they have been distributed into the Genera there characterized. The CRUSTACEA have been distributed into the Genera proposed by that author in the 11th volume of the *Linnean Transactions*^b: but the families and orders of this class are those which are characterized by Latreille in the last edition (1829) of the *Règne Animal* of Cuvier; and the same authority is followed in the arrangement of the INSECTA, as far as a mode of preservation so inconvenient for their examination would permit.

To each individual specimen is given the Synonym of the Author with whose description, after a careful comparison, it seemed best to correspond. The same care has been taken in the references to the figures of the species; and where the opportunity was not afforded of comparing the specimen with the figure quoted, the reference is noted with the typographical mark †.

The appellatives and specific terms of Linnæus are taken from the 12th edition of his *Systema Naturæ*; those which are adopted from the 13th edition of Professor Gmelin, are marked *Gmel.* or *Linn. Gmel.*

In all the cases where a record has been preserved of the *Habitat* of the specimen, it is given after the Synonimes and Figure; but where that important part of the history of the specimen is wanting, the *Habitat* of the species is given on the authority of the author whose synonym is adopted.

Those specimens, which appeared to have been insufficiently, or hitherto not at all described, have been in some cases supplied with more detailed descriptions, or they are proposed as new species. The characters of the latter, however, rest

^a Art. XXV. p. 527.

^b Art. XXXI. p. 306. A Tabular View of the external Characters of Four Classes of Animals, which Linné arranged under *Insecta*. By William Elford Leach, M.D.

entirely on the responsibility of the individual intrusted with the execution of this portion of the Catalogue.

The simple numbers prefixed indicate the original Hunterian specimens; those which have the letters J. B. added to them were collected by Sir Joseph Banks during his voyage round the world with Captain Cook, and were presented by him to Mr. Hunter. The subsequent Donations and Additions to the Collection are interposed with the preceding by adding the letters A, B, &c. to the number corresponding to that of the Hunterian specimen which immediately precedes them: thus the Donation which follows No. 132 is marked 132 A.

The following are the Abbreviations most commonly used in this Fasciculus of the Catalogue:—

- Linn.* CAROLI A LINNE', Systema Naturæ, Ed. xii. Holm. 1767. 1768.
Linn. Gmel. or Gmel. CAROLI A LINNE', Systema Naturæ, Ed. xiii. cura Io. Frid. Gmelin. Lips. 1789.
Cuv. CUVIER, M. Le Chevalier, Le Règne Animal distribué d'après son Organization. Paris, 1817.
Lam. DE LAMARCK, M. Le Chevalier, Histoire Naturelle des Animaux sans Vertèbres. Paris, 1816, 1822.
Sav. SAVIGNY, JULES-CE'SAR, Mémoires sur les Animaux sans Vertèbres. Paris, 1816.
Sav. Ann. SAVIGNY, JULES-CE'SAR, Système des Annelides, principalement de celles des Côtes de l'Egypte et de la Syrie.
Rud. RUDOLPHI, CAROLO ASMUNDO, Entozoorum sive Vermium Intestinalium Historia Naturalis. Amstelædami, 1808.
Rud. Syn. RUDOLPHI, CAROLO ASMUNDO, Entozoorum Synopsis. Berolini, 1819.
Fabr. FABRICII, JOH. CHRIST., Entomologia Systematica Emendata et Aucta. Hafniæ, 1791, 1794.
Latr. LATREILLE, P. A. Genera Crustaceorum et Insectorum. Parisiis, 1806, 1809.
Latr. LATREILLE, P. A. Le Règne Animal, par M. le Baron Cuvier, Tom. iv. et v. Nouvelle édition. Paris, 1829.

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CATALOGUE.

NATURAL HISTORY.

VEGETABLES IN SPIRIT.

No.

1. **THE** Radicle, Plumula, and Cotyledons of a Pea, shewing the process of vegetation.

Part of the plumula has been cut off; apparently to shew that the remainder has the power of throwing out new lateral shoots.

2. A yellowish fruit or berry, like that of some very large Solanum.
3. A fruit with a quadrifid integument with blunt divisions, allied to the genus Mespilus.
4. A fruit, like a diminutive lemon or lime.
4 A. The fingered citron (*Citrus monstrosus*); from the West Indies.

Donor, Mrs. Robinson.

- 4 B. *Anacardium orientale*.

A fine specimen of the cashew nut and apple, which, like some of the preceding specimens, has been included in a bottle when very small, and has grown there.

Donor, Sir Everard Home, Bart. V.P.R.S. &c.

- 4 c. *Cheirostemon platanoides*. South American Hand-plant.

It is destitute of a corolla, the fructification being lodged in the calyx only.

It is also called *Cheiranthodendron*.

Donor, William Lynn, Esq.

5. A piece of Botany-Bay wood, three or four inches long, and an

inch and a half thick ; the wood white ; the bark fine pale cinnamon lake, and of a lamellated structure.

‘From a tree of the size of a dwarf apple-tree.’

6. A beautiful specimen of Sea-grape Fucus (genus Acinaria).

The air-vesicles are pedicellated, pyriform, about half an inch in length, and are surmounted by a small filament, which, in one of them, terminates in a downy tuft. Its fructifications are small elongated bodies, attached in bunches, of from one to three inches in length, to the sides of the stem and to the base of the fronds.

7. Fucus turbinatus? Linn. Gmel.

A Fucus with the air-vesicles pedicellated, frequent, and alternate ; of a triangular form, expanding into a foliaceous crenate summit. The fructifications, like bunches of currants, are attached to the base of the peduncles of the air-vesicles.

8. Fucus nodosus, Linn. Gmel. The Knobbed Fucus.

Figured in Stackhouse's Nereis Britannica, pl. 10.

Habitat species. Not uncommon on our coasts ; the specimen is probably from the coast of America, as many specimens of the striated barnacle (Pentalasmis striata) are attached to it.

9. The Stipes or roots of Fucus loreus.

Hab. sp. Isle of Portland, and some other parts of our coasts.

10. A section of a very singular hollow Fucus ; with a smooth internal surface, but tuberculated externally and supporting cylindrical branches.

Hab. ———

11. Ulva lactuca, Linn.

Hab. sp. European coasts.

12. Ulva pavonia, Linn.

Hab. sp. This beautiful species is common on the southern coast of France.

13. Group of some branched, capillary, dichotomous Ulvæ or Confervæ adhering to the stem of a Fucus.

14. Portion of a vertebra, with a group of Capillary Confervæ adhering to it ; the fibres of which, when magnified, appear flattened. Length about three inches.

ANIMALS IN SPIRIT.

DIVISION EVERTEBRATA.

Type ACRITA^a.

Class POLYPI.

Ordo VAGINATI. (Polypi with Polypiaries^b.)

No.

15. *Tubularia ramosa*, Lam. Linn. Branched Pipe Coralline.

Fig. in Ellis's Corallines, *pl.* 16. *fig.* a.

Hab. sp. European seas.

16. *Sertularia abietina*, Lam. Linn. Sea-fir Coralline.

Fig. Ellis's Corallines, *pl.* 1. *fig.* 2. b. B.

Hab. sp. European seas.

Numerous examples adhering to a long hollow stem or tube; some small Pollicipes are intermixed. The ovaries abound in winter-time.

17. *Sertularia geniculata*, Lam. Linn. Knotted Sea-thread Coralline.

Fig. Ellis's Corallines, *pl.* 12. *fig.* 19. b. B.

Hab. sp. European seas; often attached, as in the present example, to the podded fucus.

18. *Sertularia geniculata*:—repent and erect on a piece of fucus.

Many with the oval jar-shaped vesicles attached, which contain the germs of the future Corallines.

19. *Ascidia intestinalis*, overgrown by *Sertularia geniculata*.

"I have met with it on the coast of Sussex, growing upon the *Ascidia intestinalis* of Linn. Syst. Nat. ed. 12. p. 1087, which is a soft, white, membranaceous animal, nearly egg-shaped, that fixes itself by its base to rocks and shells; has two openings, one at the top and the other a little lower,

^a Nervous System molecular.

^b In thus rendering the *Polypes à Polypiers* of Lamarck, the term Polypiary is adopted, as according with the termination of Aviary and Apiary. Lamarck, indeed, illustrates his idea of the relation between the stony or corneous axis of the polypes, and the polypes themselves, by comparing the former to the nidi of social hymenoptera; but in the opinion of Linné and Pallas the connexion is of a much more intimate nature.

from whence it squirts out the water. On this the Knotted Sea-thread Sertularia, or Coralline, sends forth its root-like tubes, nearly in straight lines; from whence arise, at a small distance from each other, young sprigs about an inch high, properly furnished with their denticles and polype-heads, so as to form a beautiful little grove-like figure of this animal. This most elegant specimen I have preserved in spirits."—Ellis and Solander on Zoophytes, p. 49.

- 19 A. *Sertularia pumila*, Lam. Sea-oak Coralline.

Fig. Ellis's Corallines, *pl.* 5. *fig.* 8. a. A.

Hab. On the English coasts, frequently attached to the broad-leaved indented Sea-oak Fucus. This specimen is from the beach at Lancing, Sussex.

Donor, W. Clift, Esq. F.R.S.

- 19 B. A beautiful specimen of Sertularia, with the branches equidistant and placed in a spiral order round the stem; another species of Sertularia is intermixed.

Hab. Pacific Ocean. Collected in the Expedition of Captain Beechy in H. M. S. Blossom; and presented by G. Tradescant Lay, Esq. 1828.

20. Sertularia.

Hab. ———

21. Sertularia.

Hab. ———

- 22 J. B. A fine group of Sertularia or Antennularia, growing from the margin of one of the valves of a large Mytilus.

Hab. Pacific Ocean.

23. *Antennularia ramosa*, Lam. *Sertularia antennina*, Ellis. Lobster's-horn Coralline.

Fig. Ellis's Corallines, *pl.* 9. *fig.* 14. b. from a dried specimen.

Hab. *sp.* European seas.

This is a fine specimen of the branched variety.

24. *Plumularia falcata*, Lam. *Sertularia falcata*, Linn. Sickle Coralline.

Fig. This species is the conspicuous centre figure in the Frontispiece to Ellis's Corallines; also figured dry, at *pl.* 7. *f.* 11. a. A.

Hab. sp. "This Coralline is common on the coast of Kent, near Sheerness, in the Isle of Sheppey; and on the shores of many other parts of these kingdoms."—Ellis.

A beautiful group on the shell of a bivalve.

25. *Plumularia pinnata*, Lam. *Sertularia pinnata*, Solander. Jointed Sea-bristle Coralline.

Fig. Ellis's Corallines, *pl.* 11. *fig.* 16. a. A.; *pl.* 38. *fig.* 4.

Hab. sp. Coasts of England and France.

Many elegant specimens, attached to a portion of *Fucus lendigerus*.

26. *Cellaria salicornia*, Lam. *Cellaria farciminoidea*, Ellis. Bugle Coralline.

Fig. Ellis's Corallines, *pl.* 23.

Hab. sp. Mediterranean; a well-known species.

Along with the *Cellaria* are some specimens of *Plumularia myriophyllum*, Lam.

27. *Cellaria salicornia*.

28. *Dichotomaria lapidescens*, Lam. *Corallina lapidescens*, Solander. Stony dichotomous Coralline.

Fig. Ellis's Zooph. *pl.* 21. *fig.* 9.

Hab. sp. The coasts of Teneriffe.

29. *Dichotomaria lapidescens*.

In this specimen the downy or tomentose covering of the joints is in many parts preserved.

30. *Dichotomaria rugosa*? Lam. Annulate rugose Coralline.

This specimen manifests the character "*articulis cylindricis annulato rugulosis subcontinuis*"; but is much smaller than the figure quoted by Lamarck; viz. Ellis's Zoophytes, *pl.* 22. *fig.* 3.; it is of the size of *Corallina fragilissima*, figured in *pl.* 21. *fig.* d. of the same work.

31. A portion of *Fucus* of which the stem is incrustated with *Flustra telacea*, Lam. Network Sea-mat.

32. *Flustra pilosa*, Lam. Linn. Hairy Sea-mat.

Fig. Ellis's Corallines, *pl.* 31. b.

Hab. sp. European seas; commonly encrusting *Fuci* and other marine

plants, and sometimes raising itself into a leafy figure. In the present specimen it invests in an elegant manner the ramifications of *Fucus ceranoides*.

33. *Flustra pilosa*. Hairy Sea-mat.

The variety which rises into irregular leaf-like forms.

34. *Tubipora musica*, *Linn.* Red Organ-pipe Coralline.

Hab. sp. "When Mr. Banks and Dr. Solander saw them in vast abundance on the coast of New South Wales, they appeared upon the tide of ebb covered over with a striated gelatinous substance, which was so extremely slippery, that it was dangerous to tread upon them. The animal that inhabits them appeared to fill both the tube and inner little pipe; but they had not time to examine them alive in sea water, from the dangerous situation they were in themselves."—Ellis's *Zoophytes*, p. 144. pl. 27.

34 A. Specimens of *Arcturus tuberculatus*, *Lair.* (*Cuv. Règne Animal, nouv. ed. iv. p. 139.*) infested with parasitic *Sertulariæ*, *Flustræ*, and small *Madreporæ*.

Collected in the Northern Expedition of Captain Parry, 1820, and presented by Alexander Fisher, Esq., Surg. R.N.

34 B. A portion of *Madrepore*, of the genus *Astrea*, *Lam.*, with the animal part remaining in the cells.

Hab. ———

Donor, the Rev. Dr. Buckland, F.R.S. F.G.S. &c.

35. *Melitæa coccinea*, *Lam.* *Isis coccinea*, *Ellis, Linn.* Dwarf Scarlet *Isis*.

Fig. Ellis's *Zoophytes*, pl. 12. fig. 5.

Hab. sp. Indian Ocean. Coast of the Mauritius.

36. *Gorgonia pennata*. *Var. B, cortice albido flavescente*, *Lam.* *Var. A, Americana*, Lamouroux.

Fig. Ellis's *Zoophytes*, pl. 14. fig. 3.

Hab. sp. The Antilles and West Indies.

Many of the small Polypes with their ciliated tentacula may be seen extending from the lateral pores.

37. *Gorgonia alba*? *Lam.*
A small species, habit flat, with alternate doubly pinnate branches.
Hab. ———
Adheres to a coriaceous tube, probably of an Annelide.
38. *Gorgonia.*
Vide *No. 2. pl. 18.* Ellis's Zoophytes.
39. *Corallina officinalis*, *Lam. Linn.* Common Coralline.
Fig. Ellis's Corallines, *pl. 24. fig. 2.*
Hab. sp. The European seas.
This group, which is attached to the shell of a limpet (*Patella vulgata*), seems to be the second variety of Lamarck, *minor et tenuior.*
40. A similar group of *Corallina officinalis*, intermixed with *Corallina rubens*, on a *Patella.*
41. *Flabellaria tuna*, *Lam.* *Corallina tuna*, *Ellis.*
Fig. Ellis's Zoophytes, *pl. 20. fig. E.*
Hab. sp. Mediterranean.
42. *Spongia*; to which many specimens of *Zoanthus Ellisii* (*No. 72.*) are attached.
43. A section of a simple, radiated, subpedicellated Sponge or *Alcyonium*, attached by a contracted base to a pebble.
44. A branched Sponge, intermixed with *Cellaria salicornia*, *Sertulariæ*, *Plumulariæ*, *Ascidia*, &c.
45. *Spongia*? from Sumatra.—It is a slender substance, of a cancellated or honeycomb structure, and consists of upright laminæ slightly muricated on the edges.
46. A portion of cancellated and lamellated Sponge similar to the preceding; from Sumatra.
47. *Spongia plicifera*, *Lam.*
Hab. sp. The seas of America.
- 47 A. *Spongia mammillaris*, *Müller, Zool. Dan. iv. p. 44.*
Fig. *Zool. Dan. tab. clviii. fig. 3, 4.*

Hab. Northern Ocean. Collected in the Northern Expedition, 1820, and presented by Captain Edward Sabine, F.R.S.

47 B. *Spongia mammillaris*^a.

Collected in the Northern Expedition, 1820, and presented by Alexander Fisher, Esq.

47 c. *Tethia lyncurium*, *Lam. Mém. du Museum*, i. var. 2. *Fibris radiantibus arcuatis, compositis*, p. 69-70.

Fig. Esper. Suppl. 2. pl. 19. fig. 4, 5.†

Hab. Shores of Abyssinia.

Donor, Henry Salt, Esq. 1811.

48. *Alcyonium favosum*? *Lam.*

Hab. Sumatra.

Ordo TUBIFERI.

49. *Lobularia digitata*, *Lam.* *Alcyonium digitatum*, *Linn.*

Fig. Ellis's Corallines, pl. 32. fig. 3. a. A.

Hab. Coasts of England.

Adhering to a pebble. A section is made to show the structure.

50. *Lobularia digitata*, on the stem of a fucus.

Clusters of ova are found in autumn at the base of the polypi of the *Lobularia*.

51. *Lobularia digitata*, with smaller, more elongated and frequent lobes than in the preceding specimens.

Hab. ———

51 A. *Xenia umbellata*, *Sav. Lam.*

Hab. The specimen is from Abyssinia, and adheres to a portion of coral rock.

This is one of the most remarkable of the compound animals. The polypi, furnished with eight pectinated tentacles, are clustered like flowers at the extremities of the stems proceeding from the fixed base.

Donor, Henry Salt, Esq. 1811.

^a Lamarck has not noticed this species. From its texture, as exhibited in this section, it would appear to belong to his genus *Geodia*.—*Anim. sans Vertèbres*, ii. p. 387.

Ordo NATANTES.

52. *Veretillum cynomorium*, *Lam.*

Fig. Phil. Trans. liii. tab. xxi. *fig.* 3, 4, 5. The finger-shaped Sea-pen.

Pallas, Miscell. Zool. tab. xiii. *fig.* 1—4. *Pennatula cynomorion*.

Hab. sp. Mediterranean.

53. *Pennatula phosphorea*, *Lam. Linn.* *Pennatula britannica*, *Ellis.*

Fig. Phil. Trans. liii. tab. xix. *fig.* 1—5.

Hab. sp. Coasts of England; European seas.

The stem and the extremities of the pinnæ of this specimen are white,—it seems approaching to the white variety.

54. *Pennatula phosphorea*, of a deep red colour.55. White and red variety of *Pennatula phosphorea*.56. *Pennatula grisea*, *Lam.* Gray spiny *Pennatula*.

Fig. Esper, Suppl. 2. tab. i. †

Hab. sp. Mediterranean.

57. *Pennatula argentea*, *Lam. Linn. Gmel.*

Fig. Soland. & Ellis, Zooph. pl. 8. *fig.* 1, 2, 3.

Hab. sp. East Indian Ocean. Its form is longer, and the pinnæ are shorter and more numerous than in the preceding species.

The specimen is suspended by the extremity of the bony axis of the body, which is drawn out a little way.

58. A very fine specimen of *Pennatula argentea*.

Of all the genus this species is the most remarkable for the brilliant phosphorescent light which it emits in the night season.

59. *Renilla americana*, *Lam.* *Pennatula reniformis*, *Solander.* Kidney-shaped *Pennatula*.

Fig. Phil. Trans. liii. tab. xix. *fig.* 6—10.

Hab. sp. Coasts of South America.

60. *Renilla americana*.

In this specimen, half of the side to which the Polypi are attached has been dissected off, to show the ramifications of the trunk; the radiated side is left entire.

61. The portion of *Renilla americana* removed from the preceding preparation.
62. *Renilla americana*?—appears to have been subjected to the action of an acid, and to have been divided by a longitudinal section to show its structure.

63. *Virgularia juncea*, *Lam.*

Fig. Esper, Suppl. 2. *tab.* iv.†

Hab. sp. European seas.

Part of the bone only of this species. The best figure of this genus is that of *Virgularia mirabilis*, in Müller's *Zoologia Danica*, *tab.* xi. See also Professor Grant's description in Brewster's *Philosophical Journal*, vii. p. 30.

Type **RADIATA.**

Class **ACALEPHÆ.**

Ordo **LIBERÆ.**

(*Hydrostaticæ.*)

64. *Physalis pelagica*, *Lam.* *Holothuria physalis*, *Linn.* *Amœnitates Acadamicæ*, iv. p. 254. The Portuguese Man-of-War, Frigate, or Sea-nettle of sailors.

Fig. Linn. *Amœn. Acad.* *tab.* iii. *fig.* 6. *mala.* Bory de St.-Vincent, *Voyage en quatre Iles d'Afrique*, *pl.* 54. *fig.* 1.

Hab. sp. Tropical seas. Are seen floating on the sea during calms, but sink and disappear in tempestuous weather; attaching themselves to marine bodies during the agitation of the waters. When handled, they exude a subtile fluid, which causes much pain and heat. In the specimen the tentacula are retracted or lost.

- 64 A. A singularly fine specimen of *Physalis pelagica*.

The tentacula extending from the inferior surface of the animal are of two kinds; some are short and thick, others remarkable for their length, and for the lively and brilliant colours which they reflect during life.

Hab. Gulf of Mexico.

Donor, Mr. Bullock.

(Medusidæ.)

- 64 B. *Beroë*, Müller, Zool. Dan. Prodr. p. xxix.
Hab. Northern Ocean.
Donor, Capt. Ross, R.N. 1818.
- 64 c. Specimens of *Beroë ovatus*? Bruguière, *Encycl. Méth. Vers.*, p. 175.
 These and the preceding specimens are much contracted by the spirit.
Hab. Arctic Ocean.
Donor, Lieut. Parry, R.N. 1818.
65. *Velella mutica*, Lam. *Medusa velella*, Gmel. The Sally Man.
Fig. Browne's Jamaica, pl. 48. fig. 1.
Hab. sp. Atlantic Ocean.
 The bone or fulcrum only of this species.
- 66 J. B. *Velella limbosa*, Lam.
Fig. Forsk. Ægypt. tab. xxvi. fig. K.
Hab. ———
67. *Porpita gigantea*.
Fig. Péron et Le Sueur, Voyage, pl. 31. fig. 6. †
Hab. Atlantic Ocean.
68. *Medusa hemisphærica*, Müller, Gmel.
Fig. Müller, Zool. Dan. tab. vii. fig. 1—5.
 Many small specimens.
69. *Medusa*, with a crenate margin, and tentacula. *Callirhoe*? Lam.
- 69 A. *Medusa*, with a single central inferior mouth, and four tentacular arms; no tentacula at the margin. *Orythia*? Lam.
 The fibrous structure beneath the integument is very distinct in this specimen.
Donor, Sir A. Carlisle, F.R.S. F.L.S. &c.
70. A small *Medusa*, with tentacula at its circumference, and a pedunculated mouth, of the genus *Dianæa*, Lam.
71. *Aurelia aurita*, Lam. *Medusa aurita*, Linn. Gm.
Fig. Müller, Zool. Dan. tab. lxxvi.
Hab. sp. The Baltic.

72. *Cassiopea*, *Lam.* A small species.

Bristles are placed in the four orifices, situated on the inferior surface.

73. A small *Medusa*. Gen. *Cyanea*? *Lam.*

Hab. ———

- 73 A. Luminous *Medusæ*, of very small size.

Hab. Brought from the Red Sea. They were in such profusion, that the proportion of *Medusæ* to the water was fully one-third, perhaps nearly half. They were luminous only while alive.

Donor, Henry Salt, Esq. 1811.

Ordo AFFIXÆ.

(*Actiniadæ*. *Sea Anemones*.)

74. *Zoanthus Ellisii*, *Cuv.* *Actinia sociata*, *Ellis.* Clustered Animal Flower.

Fig. *Phil. Trans.* vol. lvii. pl. 19. fig. 1, 2.

"Though I have had the clusters of this animal drawn erect on a rock, I am persuaded, from the slenderness of their make, their situation would be more natural if they were inverted." *Ellis's Zooph.* p. 5.

In the present example they are attached to the whole circumference of some central substance, and extend from it in every direction.

Hab. sp. West India Islands. The specimens examined by *Ellis* were from *Dominica*.

75. *Zoanthus Ellisii*.

Some of the individuals in this group being less contracted than the preceding, the extremities of the radiated tentacula may be seen. These and the structure of the cavity are shewn in Nos. 260, 261, Gallery Series.

- 75 A. Two solitary specimens of *Zoanthus*, each adhering to a pebble.

Hab. Northern Ocean.

Donor, Captain *Buchan*, R.N.

- 76 J. B. *Zoanthus Banksii*, *R. Owen.*

Many specimens of fixed *Acalephæ*, some single, others attached by two and three to a common base. In length about one inch and a half, although doubtless contracted by long maceration in spirit; in form cylindrical, and

about three or four lines in diameter. Exteriorly they are muricated, and furrowed longitudinally; their interior presents an inverted hemispherical mouth or proboscis, with retracted tentacula, and a membranous stomach loosely connected to the sides of a cavity which extends to within half an inch of their base. Along the sides of this cavity there are also longitudinal plicæ of membrane, with an appearance of minute spiral tubes running along their free margins, most probably the ovaries.

Their fixed condition, and participation of a common base, point out the genus *Zoanthus* of Cuvier as their proper situation; whilst their structure appears to corroborate the opinion of that celebrated author as to the rank of the genus itself in the scale of animal life. See *Règne Animal*, iv. p. 43; and on the other hand, Lamarck, *Anim. sans Vert.* ii. p. 65.

Hab. Society Isles.

77. *Actinia rufa*, *Lam. Linn.* Red *Actinia*, or Sea Anemone.

Fig. Müller, *Zool. Dan. tab.* xxiii.

Hab. sp. Northern European seas.

78. *Actinia rufa*?

Two specimens, but their original colour is lost.

79. *Actinia crassicornis*, *Lam. Linn.*

Fig. Baster, *Opusc. Subs. tab.* xiii. *fig.* 1.

Hab. sp. European seas.

A fine specimen, in the expanded state.

80. *Actinia crassicornis*.

This specimen is contracted into a conical form.

81. *Actinia crassicornis*.

The base contracted, and the aperture of the mouth drawn open.

82. *Actinia mesembryanthemum*? *Ellis*.

Much contracted, a lozenge-shaped portion cut out of the base.

83. *Actinia anemone*, *Lam. Ellis.* Sea Anemone.

Fig. *Encycl. Méth. pl.* 70. *fig.* 5, 6.

Hab. sp. American Ocean.

84. *Actinia helianthus*, *Lam. Ellis.* *Hydra helianthus*, *Linn.* Sea Sunflower.

Fig. Encycl. Méth. *pl.* 71. *fig.* 1. 2.

Hab. sp. American Ocean.

Mr. Ellis observes, "The tentacles or claws of all these animal flowers that were preserved in spirits are greatly contracted."—Hist. of Zoophytes.

Class ECHINODERMATA.

(*Asteriadae*. *Starfish*.)

85 J. B. *Alecto*, *Leach*, *Zoolog. Miscell.* ii. *p.* 61. *Comatula solaris*?

Lam.

Hab. Society Isles.

The dorsal rays of this specimen are lost; but the tubular projecting mouth, also characteristic of the genus, is well shown.

85 A. *Alecto glacialis*, *Leach*.

Hab. A very fine and perfect specimen brought up from 226 fathoms, in
Lat. 80° 26' N. Long. 12° 30' E. By H. M. S. *Dorothea*.

Donor, Captain Buchan, R.N. 1818.

85 B. *Alecto glacialis*.

Caught in the same latitude and longitude as the preceding.

Donor, Captain Buchan, R.N. 1818.

85 c. *Alecto glacialis*.

Hab. In 250 fathoms; Lat. 80° 26' N. Long. 11° 32' E. By H. M. S.
Trent.

Donor, Lieutenant Franklin, R.N.

86 J. B. *Alecto carinata*? *Leach*. The carinated *Alecto*.

Hab. Society Isles.

87. *Alecto carinata*, *Leach*.

Hab. ———

87 A. *Euryale verrucosum*, *Lam.* *Asterias Euryale et caput Medusæ*,
Gmel.

Fig. Linck, *Stell. Mar.* *p.* 65. *tab.* xxix. *Astrophyton scutatum*. †

Hab. Indian Ocean.

87 B. *Euryale costosum*, Lam.

Fig. Encycl. Méth. *pl.* 130. *fig. mala.* Seba, Mus. iii. *tab.* 9. *fig.* 1. *bona.*

Shaw, Nat. Miscell. iii. *pl.* 103? *Asterias caput Medusæ.*

Hab. sp. American seas.—The curiously branched rays are said to serve the purpose of a living net, and to inclose by their sudden contractions the objects which constitute the food of this species.

88. *Euryale asperum*, Lam. *Asterias caput Medusæ*, Linn.

Fig. Seba, Mus. iii. *tab.* ix. *fig.* 2. Encycl. Méth. *pl.* 127.

Hab. sp. Norwegian, Mediterranean, and Indian seas.

The pointed tubercles in this specimen are confined to the dorsal or superior aspect of the rays.

89. *Ophiura*,—a large and beautiful species.

The disk flat, subpentagonal, its diameter one inch two-thirds; the five inter-radial divisions terminating towards the mouth, each in a small round scale. The rays five in number, cylindrical, gradually attenuated to their extremities, with transverse rows of small spines laterally, as if the squamæ were ciliated. The diameter, taken from the extremities of the extended rays, is sixteen inches.

Hab. ———

An *Oph. lacertosa*? Lam.

90. *Ophiura lacertosa*, Lam.

The inferior specimen is the *Var. 2. eadem radiis fusco vel spadiceo maculatis.*

Fig. Encycl. Méth. *pl.* 122. *fig.* 4; *pl.* 123. *fig.* 1.

Hab. sp. European seas.

A portion of the tegument is removed from the dorsal aspect of the disk to show the internal structure.

91. *Ophiura echinata*, Lam. *Asterias aculeata*, Linn. Thick-spined

Ophiura. Var. 1. spinis crassis.

Fig. Encycl. Méth. *pl.* 124. *fig.* 2, 3.

Hab. ———

92 J. B. *Ophiura echinata. Var. 2. dorso lævi, spinis tenuioribus.*

Hab. Society Isles.

93 J. B. *Ophiura echinata.*

Hab. Society Isles.

- 93 A. *Ophiura echinata*, Lam. *Var. 3. radii versus extremitates magis attenuatis.*

Fig. Müller, Zool. Dan. tab. xciii. *Asterias nigra.*

Hab. Northern Ocean. By H. M. S. Trent, 1818.

Donor, Lieutenant Franklin.

- 93 B. *Ophiura squamata?* Lam.

Vide Müller, Zool. Dan. tab. xcix. *Asterias aculeata.*

Hab. Northern seas. Two specimens, by H. M. S. Dorothea.

Donor, Captain Buchan, R.N. 1818.

- 93 c. *Ophiura ciliaris?* Lam.

Linck, Stell. Mar. tab. xxxiv. fig. 56. †

Hab. Northern Ocean.

Donor, Captain Buchan, R.N. 1818.

- 93 D. *Ophiura ciliaris.*

A small specimen, from the Arctic seas. Northern Expedition, 1820.

Donor, Alexander Fisher, Esq. Surg. R.N.

94. *Asterias discoidea*, Lam.

Fig. Encycl. Méth. pl. 97. fig. 3; pl. 99. fig. 3.

Hab. ———

- 95 J. B. *Asterias exigua*, Lam. *Asterias minuta*, Gmel.

Fig. Seba, Mus. iii. tab. v. fig. 13—15.

Hab. Society Isles.

96. *Asterias exigua*,—with a variety *lobis senis.*

Hab. ———

97. *Asterias gibbosa* of Pennant, Brit. Zool. iv. p. 62. no. 59.

Hab. sp. South coast of England.

98. *Asterias rosacea*, Lam.

Fig. Encycl. Méth. pl. 99. fig. 2, 3.

Hab. ———

This species bears a great resemblance in its singular flatness of form to the *Ast. membranacea* of Gmelin; but differs in the angles of its lobes being less acute, and in its want of scales on the dorsal disk; the tegument on this aspect has very much the appearance of the fish-skin called sha-green.

99. *Asterias rosacea*.

One of the clefts of the lobes is continued to the centre of the disk.

99 A. *Asterias rubens*.

A large specimen from the Arctic seas. Northern Expedition, 1820.

Donor, Alexander Fisher, Esq. Surg. R.N.

99 B. *Asterias rubens, radiis sex*.

Hab. Arctic Ocean.

Donor, Alexander Fisher, Esq. Surg. R.N.

99 C. *Asterias, radiis septem, longitudinaliter costatis, costis verrucosis*.

A large species.

Hab. Arctic Ocean. Northern Expedition, 1820.

Donor, Alexander Fisher, Esq. Surg. R.N.

100. *Asterias lævigata, Lam. Linn.*

Fig. Grew, Mus. tab. viii. fig. 1, 2. Seba, Mus. iii. tab. vi. fig. 13, 14.

Hab. Indian Ocean. The specimen is from the coast of Sumatra.

(*Echinidæ. Sea Eggs, or Sea Urchins.*)

100 A. Numerous small *Fibulariæ* (*Fib. ovulum, Lam.*) found in the stomach of a Haddock caught at Hastings, Sussex, 1809.

Donor, W. Clift, Esq.

100 B. *Spatangus purpureus, Lam. Echinus purpureus, Linn.*

Fig. Müller, Zool. Dan. tab. vi. Encycl. Méth. pl. 157. fig. 1—4.

Hab. Northern Ocean.

101 J. B. *Echinus esculentus? Lam. Linn.*

Depressed, with green spines.

Hab. Society Isles.

102 J. B. *Echinus*.

Same species as the preceding, but of larger size.

Hab. Society Isles.

103 J. B. *Echinus*.

A small species, depressed and concave at its superior disk.

Hab. Society Isles.

103 A. *Echinus miliaris*, Lam.*Fig.* Seba, Mus. iii. tab. x. *fig.* 4. a, b.*Hab.* Northern Ocean.*Donor*, Lieut. Franklin, R.N. 1818.103 B. *Echinus miliaris*.*Hab.* Northern Ocean.*Donor*, Lieut. Franklin, R.N. 1818.103 C. *Echinus miliaris*. var. *spinis viridibus*.*Hab.* Northern Ocean.*Donor*, Captain Buchan, R.N.103 D. *Echinus lucunter*, Lam. Linn.*Fig.* Seba, Mus. iii. tab. x. *fig.* 16—18. but without the spines: they are perfect in the specimen.*Hab.* ———103 E. *Echinus*.

A small species, with depressed clavate spines.

Hab. Island of Bonin.*Donor*, G. Tradescant Lay, Esq.104 J. B. *Echinus mammillatus*, Lam.*Fig.* Seba, Mus. iii. tab. xiii. *fig.* 1, 2.*Hab.* Society Isles.

Four specimens without the spines.

105 J. B. *Echinus mammillatus*.

A beautiful and perfect specimen.

Hab. Society Isles.106. *Echinus mammillatus*.

A remarkably fine and perfect specimen from Sumatra.

107. Spines of *Echinus trigonarius*? Lam. *Cidaris mammillata*, var. 4.*Leske ap. Klein*, p. 124.*Hab.* ———108 J. B. *Echinus mammillatus*.

Some of the dorsal spines are of the same trihedral form as those exhibited in the preceding specimen.

108 A. *Cidarites metularia*, Lam.*Fig.* Seba, Mus. iii. tab. xiii. fig. 10.*Hab.* Abyssinia.*Donor*, H. Salt, Esq.

(Fistulidæ.)

109 J. B. *Fistularia tubulosa*, Lam. *Holothuria tremula*, Linn.*Fig.* Solander & Ellis, pl. 8. fig. 4, 5.*Hab.* Society Isles.110 J. B. *Fistularia tubulosa*.*Hab.* Society Isles.111. *Fistularia tubulosa*?

A small species, of a light colour; the small tubuli are very obvious along the ventral aspect of the body.

Hab. ———112. *Fistularia*.

Ten inches in length, three in breadth; flattened on the ventral or inferior aspect, convex above, and studded there and at the sides with round varioloid spots, which are dark-coloured at the margin, and have each a small hole at the centre. Qu. *Fistularia maxima*? *Forsk. Ægypt. Descript. Animal.* p. 121. t. xxxviii. B. b. It differs however from the figure and description, in the absence of papillæ, being comparatively smooth; and in the larger and less frequent maculæ.

113. *Sipunculus nudus*, Linn.?

Eight inches in length, and one inch in diameter at the anterior part of the body; but becoming narrower posteriorly, and then a little enlarging into an obtuse extremity. The proboscis appears to have been dissected, and in part removed, to show the retractile muscles: the integument is of a light grey colour and iridescent; it is impressed with numerous transverse lines decussating equidistant longitudinal ridges; the anus is situated about one inch and a half from the root of the proboscis, it is papillary and surrounded by radiating lines;—a bristle is inserted into this orifice.

Fig. Bohadsch, Anim. Marin. tab. vii. fig. 6, 7.

Hab. sp. Bay of Naples; there is no record of the *habitat* of the specimen.

- 113 A. *Sipunculus phalloides*, *De Blainville, Dict. des Sciences Nat.* xlix. p. 311. *Lumbricus phalloides*, *Pallas, Spicil. Zool.* fasc. x. p. 12. tab. 1. f. 8. 8*.

Hab. Shores of the West India Islands.

Donor, Edward Stanley, Esq. F.R.S.

In a dissected specimen of this genus in the Gallery No. 605, the intestines may be seen containing calcareous fragments of Zoophytes, which may also be observed in the intestines of dissected specimens of the allied genera *Holothuria* and *Fistularia*. But it is more probable that the animal part of the corals and madrepores is assimilated, than that nutrition is derived from the earthy basis.—“Unde denuo apparet meram terram huic quoque Mollusco, uti multis aliis, pro nutrimento esse.” *Pallas*, ut supra, p. 15.

- 113 B. *Sipunculus*.

This remarkable specimen is ten inches in length, and about one inch in diameter, of a dark lurid colour, reflecting iridescent tints. It is suspended with the mouth downwards, and the proboscis is retracted.

(*Specimina sedis incertæ.*)

114. The Animal figured but not described in Ellis's Zoophytes, pl. 8. fig. 6. “A sea animal found near the islands of Grenada.”

Its proboscis is long and narrow, and has a number of subcorneous striæ at its extremity. Two small tubes (oviducts?) project from an orifice near the anterior extremity (the anus?). The integument is subcoriaceous, of a greyish-white colour, and beset with numerous minute brown tubercles, especially at the extremities of the body.

In the MS. Catalogue of Dr. Shaw it stands as “*Physa Nebulosa*, *Solander*,” but without reference to any work in which such genus is described. It approximates closely to the genus *Sipunculus*, and is probably the same with *Sipunculus tuberculatus*, *De Blainville, Dict. des Sciences Nat.* xlix. p. 313.

- 114 A. *Mammaria*, *Müller*.

A specimen of this genus, which does not accord with the description of any of the three species in Gmelin, *Systema Naturæ*, vi. p. 3135. It is

of a globular form, three-fourths of an inch in diameter, and has a rough dirty exterior. Lamarck places this genus in his class Tunicata, but without any deductions from anatomical structure; he merely copies the descriptions and references of Gmelin.

Hab. Arctic Seas.

Donor, Lieutenant Franklin, R.N. 1818.

Type MOLLUSCA ^a.

Class TUNICATA. (Ascidies, *Savigny*, *Animaux sans Vertèbres*.)

(*Ascididæ*, MacLeay. Simple and fixed, having their orifices internally irregular.)

115. *Ascidia intestinalis*, *Lam. Linn.*

Fig. Müller, *Zool. Dan. tab. lv. Ascidia canina.*

Hab. European seas.

This specimen agrees with fig. 1, 2, 3, *juniozem vel diversam speciem*. Bristles are passed into the branchial and anal orifices.

116. *Ascidia intestinalis*. *Sertulariæ* and fragments of shells adhering to the outer tunic.

117. *Ascidia intestinalis*, with bristles passed into the cavity of the outer cloak, by both apertures.

118. The outer tunic of an *Ascidia* divided transversely, probably *Ascidia ampulla*, *Lam.*

Vide *Encycl. Méth. pl. 63. fig. 1, 2, 3.*

119 J. B. *Boltenia reniformis*, *MacLeay, Linn. Trans. xiv. p. 536.*

No. 3. Ascidia globifera, Captain Sabine, Suppl. App. to Parry's Voyage, p. ccxxiv.

Fig. *Linn. Trans. xiv. pl. 18.*

Hab. The specimen was collected by Sir Joseph Banks in his voyage round the world with Captain Cook;—probably the north-west coast of America.

^a Nervous system ganglionic, with the ganglions dispersed irregularly but connected by nervous threads.

- 119 A. A finer specimen of *Boltenia reniformis*, from Winter Harbour.
Northern Expedition, 1820.

Donor, Alexander Fisher, Esq. Surg. R.N.

(*Botryllidæ*, MacLeay. Compound and fixed, having their orifices externally regular.)

- 119 B. *Polyclinum constellatum*? *Sav.*

Fig. Mém. sur les Animaux sans Vertèbres, *pl.* 4. *fig.* 1. *p.* 189.

Hab. St. Lucia.

Donor, Rev. John Guilding, St. Lucia, 1814.

In this specimen the mass of aggregated animals forms a sphere of about three inches in diameter : they are sunk into a semicartilaginous substance of about half an inch in thickness ; and where a section has been made, the cellules occupied by the different parts of each animal may be distinctly seen. (*Vide Sav. ut supra*, *p.* 9.)

(*Lucidæ*, MacLeay. Compound and floating, having their branchial cavity open at the two extremities.)

- 119 C. *Pyrosoma atlanticum*, *Péron*, *Annal. du Muséum*, iv. *p.* 437.

Fig. *Annal. du Mus.* iv. *pl.* 72.

Hab. The Atlantic. It is remarkable for the beauty and variety of the colours that are reflected when the animal is irritated ; in the figure quoted the azure tint is given. For the structure of this singular genus see *Sav. Anim. sans Vertèbr.* *p.* 51. *et seq.*

(*Biphoridæ*, MacLeay. Aggregated in their young state, and floating.)

- 119 D. *Salpa* —, *Salpa confederata*? *Forskahl.*

Dagyza, Banks. The Chain *Dagyza*.

Fig. Home, *Comp. Anat.* ii. *tab.* lxxiii. *fig.* 1.

Removed from the Gallery (No. 3222, Old Catal.).

Hab. "In March 1801, these *Dagysæ* were observed in the sea near Cape Finisterra ; they were very near the surface, and formed chains of several yards in length. From being subject to the undulations of

the waves, they sometimes appeared to have a serpentine motion. When raised up out of the water they readily separated. The bodies composing them were all exactly similar, and lay parallel to each other; they exhibited a remarkable synchronous contractile movement, repeated about fifteen times in a minute; the action of contraction being rapid, that of relaxation slow and gradual. Their substance was a clear transparent jelly, inclosed in a very fine capsule: at one extremity was an opaque central spot or globule, of a dull red colour, from which lines appeared to radiate towards the circumference of the body." MS. note by John Howship, Esq.

120. *Salpa zonaria*, Lam. *Holothuria zonaria*, Gmel.
Fig. Pallas, Spicil. Zool. tab. 1. fig. 17. a. b. c. *Encycl. Méth. pl.* 75.
fig. 8—10.

121. *Salpa fusiformis*? Lam.
Fig. Cuvier, Ann. du Mus. iv. pl. 68. fig. 2.
Hab. Atlantic Ocean.

122. *Salpa scutigera*, Cuv. Lam.
Fig. Annales du Mus. iv. pl. 68. fig. 4, 5.
Hab. Atlantic Ocean.

123. *Salpa cristata*, Cuv. Lam.
Fig. Annales du Mus. pl. 68. fig. 1, 2.
Hab. Atlantic Ocean.

The oblique intestines and transverse muscular bands are well seen in this specimen.

124. *Salpa Tilesii*, Cuv.
Fig. Annales du Mus. iv. pl. 68. fig. 3—6.
Hab. ———

- 124 A. A fine specimen of *Salpa Tilesii*.

The cartilaginous protuberance covers the stomach and liver. Upon the protuberance there are many cartilaginous spines; others may be observed scattered over different parts of the outer sac.

125. *Salpa maxima*? Lam. Gmel.
Fig. Shaw's Nat. Miscell. vii. pl. 232.
Hab. Mediterranean and Atlantic Ocean.

126. The exterior transparent sac of *Salpa maxima*, of a consistence between cartilage and jelly.

127. *Salpa maxima*.

The outer tunic is laid open, and a bristle passed into the stomach.

128. *Salpa maxima*.

It is laid open, and the stomach, oblique intestine, and transverse muscular bands are more completely exposed.

Class ACEPHALA. (Acephales testacés, *Cuvier*.)

129. *Teredo navalis*, *Lam. Linn.* The Ship-borer.

Fig. Home, *Comp. Anat.* iv. *pl.* 43.

Hab. sp. In wood immersed in sea-water.

130. *Teredo navalis*, with the valves, but stripped of the shelly tube.

131. Two specimens of *Teredo navalis* :

One of these is removed from its tube and laid open in several places ; the other has a portion of the calcareous tube attached to one extremity.

132. A portion of timber injured by the *Teredo navalis* :

The soft parts and valve are seen projecting from the shelly tube, which is laid open to show its course through the wood.

132 A. *Pholas dactylus*, *Lam. Linn.*

Fig. Pennant, *Brit. Zool.* iv. *pl.* 39. *fig.* 10.

Hab. sp. European seas, in rocks.

Donor, Sir Anthony Carlisle, F.R.S. F.L.S. &c. 1818.

132 B. *Pholas dactylus*.

The valves divaricated to show the soft parts *in situ*.

Donor, Mrs. Robinson, 1810.

132 C. *Pholas dactylus*.

One of the valves removed, giving a side view of the animal.

Donor, Mrs. Robinson, 1810.

132 D. *Pholas crispata*, *Lam. Linn.*

Fig. Pennant, *Brit. Zool.* *pl.* 40. *fig.* 12 ?

Hab. sp. European seas. The specimen is from a Septarium.

Donor, Sir Everard Home, Bart.

- 132 E. *Solen strigilatus*, *Lam. Linn.*
Fig. Poli, *Testacea utriusque Sicil. i. tab. xii.*
Hab. Mediterranean, and Atlantic Ocean.
Donor, William John Broderip, Esq. F.R.S. &c. Sec. G.S. 1828.
- 132 F. A small bivalve, of the genus *Pectunculus*, *Lam.*
Hab. Arctic seas; attached by its byssus to a pebble.
Donor, Captain Buchan, R.N.
133. *Modiola discors*, *Lam.* *Mytilus discors*, *Gmel.*
Fig. Chemnitz, *Conch. viii. p. 195. pl. 86. fig. 768.*
Hab. Australian Ocean. The specimens are imbedded in a mass of byssus.
- 133 A. *Modiola trapezina*, *Lam.*
Hab. These specimens were taken off Cape Horn, by the Donor, Mr. S. Stutchbury. Lamarck appears to have been unacquainted with the *Habitat* of this species.
134. Soft parts of one of the Conchifera, probably of an Anodon.
- 134 A. *Mytilus polymorphus*, *Lam.* adhering to *Anodon anatinus*.
 A bristle is passed into the central aperture of the mantle, which, except at this part, is closed all round: it has two tubes; the foot is very small.
Hab. Dredged up in the Commercial Docks, London, where the species has become naturalized, having been originally transported by merchant vessels from the Continental rivers.
Donor, Mr. Samuel Stutchbury.
135. *Mytilus edulis*, var. β , *Linn.* *Mytilus pellucidus*, *Maton & Rackett.* Common Muscle.
Fig. Lister, *Conch. pl. 362. fig. 200.*
Hab. European seas.
- 135 A. *Unio margaritiferus*, *Lam.* *Mya margaritifera*, *Linn.* Pearl Muscle.
Fig. Da Costa, *Brit. Conch. pl. 25. fig. 3.†* Pennant, *Brit. Zool. iv. p. 80. pl. 43. fig. 18.*
Hab. The rivers in the mountainous parts of Great Britain.
 The present specimen, with many others, was brought from the Loch of Kenmure Castle in Dumfries-shire, where they abound. "The poor

people, when the Loch is low, rake out the muscles, and select those with deformed exteriors, as most likely to contain pearls." The pearl in this example is imbedded in the foot of the animal; in others it was found unattached within the mantle. See Pennant, *ut supra*, p. 80. 81; and Dr. Fleming's Philosophy of Zoology, ii. p. 503.

Donor, Anthony White, Esq. 1828.

- 135 B. *Meleagrina margaritifera*, *Lam.* *Mytilus margaritiferus*, *Linn. Gmel.* Pearl Oyster; the black variety.

Hab. Tropical seas.

In the present specimen the pearl is imbedded in the membrane of the branchiæ. It was taken at Hao, the Bow-Island of Cook, South Pacific, by the

Donor, Mr. Samuel Stutchbury.

136. *Plicatulæ* (*P. depressa*? *Lam.*), intermixed with *Zoanthus Ellisii*.

137. *Lima squamosa*, *Lam.* *Ostrea lima*, *Gmel.*

Fig. Chem. Conch. vii. *tab.* 68. *fig.* 651.

Hab. American seas.

- 137 A. *Pecten Franklinii*, *Clift, MS.*

Hab. Arctic seas.

Donor, Lieutenant Franklin, 1818.

- 137 B. *Terebratula dorsalis*, *Blainville, Malacolog.* i. p. 510. The Lamp-cockle.

Fig. Blainv. Malacol. ii. *pl.* 51. *fig.* 1. 1a.

Hab. ———

Two specimens, one attached by its byssus to the other; the upper one was examined by De Blainville in 1827, but the soft parts were in too imperfect a state to afford any satisfactory result.

Donor, Sir Everard Home, Bart. V.P.R.S.

Class GASTEROPODA.

138. *Chiton marmoratus*, *Linn. Gmel.*

With an octovalve, canaliculate, and diagonally striped shell; the sides of the body squamulose.

Fig. Chemn. Chiton, pl. 1. fig. 5.

Hab. American seas.

139 J. B. Chiton.

With an octovalve green shell, the lateral areae impressed with very delicate radiating lines; the sides of the body squamulose. *Chiton glaucus, Gray, Spicil. Zool. p. 5?*

Hab. Australian seas.

140 J. B. Chiton.

With a grey octovalve shell, impressed with wavy longitudinal lines, the last valve pyramidal, the sides of the body smooth.

Hab. Australian seas.

141 J. B. Chiton.

Shell octovalve, with a granulate margin, and a longitudinal central brown stripe. *Chiton piceus, Linn. Gmel.?*

Hab. Australian seas.

142 J. B. Chiton.

With an octovalve, subcarinated, scabrous shell; the sides of the body provided with short black aciculi, projecting from foramina. *Chiton rari-pilosus, De Blainv. Dict. des Sciences Nat. xxxix. p. 547.*

Hab. Australian seas.

143 J. B. Small specimens of Chiton.

With a narrow octovalve shell, on each side of which, nine bundles of pale blue shining hairs project from as many foramina.

Fig. Encycl. Méth. pl. 163. fig. 13. Pennant, Brit. Zool. iv. pl. 36. fig. 1. p. 71. Chiton crinitus?

Hab. Sea near Aberdeen: Pennant.

144. *Chiton crinitus, seu fascicularis.*

With a narrow octovalve shell, and a series of foramina on either side, which may have contained aciculi.

145. This specimen is of a genus distinct from *Chiton* and *Chitonellus*, *Lam.*

Its octovalve shell is completely covered by the skin. A small longitudinal slit corresponds to a crista in the middle of the convexity of each valve,

and on either side of these there is a series of elevated puncta. The cuticle has become detached. *Chiton porosus*, *Burrow, Elem. of Conch.?*

145 A. *Dentalium entale*, *Linn.*

Fig. D'Argen, *Conch. tab. iii. fig. κκ.*

Hab. Many specimens of the tubes and portions of the animals found in them*, from Hartlepool, Yorkshire.

Donor, The Very Rev. George Markham, Dean of York.

146. *Patella vulgata*, *Linn.* The Common Limpet.

Fig. Pennant, *Brit. Zool. iv. t. 89. fig. 145, 146.*

Hab. Coasts of Europe.

Fucus rubens is attached to the shell.

147. *Patella vulgata*.

The soft parts, without the shell.

148. *Patella vulgata*.

The branchial membrane is reflected, and the commencement of the alimentary canal exposed.

148 A. Two specimens of *Patella*, with masses of ova (?) attached to the soft parts.

* Respecting these animals, Savigny gives the following note, in his *Système des Annelides*, p. 98. "Mon sentiment, à l'égard de ces tubes calcaires, est maintenant appuyé par un fait positif. J'ai sous les yeux l'animal du *Dentalium Entalis*, que M. Leach vient de m'envoyer, et je ne lui trouve pas à l'extérieur le moindre vestige d'articulations: il n'a certainement ni pieds ni soies. C'est un animal très-muscleux, de forme conique comme sa coquille, très-lisse et très-uni dans son contour, terminé postérieurement par une queue distincte, roulée en demi-cornet, au fond de laquelle est l'anus: la grosse extrémité du corps est tronquée, avec une ouverture voûtée assez semblable à la bouche d'un Trochus, de laquelle sort un panache conique produit par l'entrelacement d'une innombrable quantité de petits tentacules filiformes, très-longs, terminés tous en massue. Voilà des points que je peux donner pour certains. Je soupçonne en outre que l'animal est pourvu d'une trompe, et que dans son développement complet, il déploie un luxe de tentacules beaucoup plus grand encore que celui que l'état de contraction laisse d'abord supposer. Le tube intestinal, qui descend entre deux énormes colonnes de muscles, me paroît aller droit à l'anus et n'être accompagné d'aucune viscère remarquable. Ces observations faites à la hâte suffisent néanmoins pour prouver que la Dentale n'est point une Annelide, et qu'elle pourrait même être exclue de la division des animaux articulés."

In accordance with this opinion, Blainville has arranged the genus *Dentalium* among the Mollusca in his Sub-class Paracephalophora Hermaphrodita, Order Cirrhobranchiata. See also on this subject the Zoological Journal, iv. No. xiv. p. 175.

Hab. Caught on the Sussex coast.

Donor, Mrs. Robinson, Sept. 1829.

149. *Haliotis tuberculata*, *Lam.*

Fig. Lister, *Conch. pl.* 611. *fig.* 2.

Hab. European and Atlantic Oceans.

150. A small *Murex*, with several ovaria adhering.

They are of a somewhat triangular form, and rather larger than those called by Ellis *Hydræ triticeæ*.

151. *Buccinum undatum*, *Linn. Gmel. Lam.*

Fig. Pennant, *Brit. Zool. iv. pl.* 73. *fig.* 90.

Hab. European seas.

152. *Buccinum undatum*, with its inhabitant and operculum.

153. *Cypræa tigris*, *Linn. Gmel. Lam.*

Fig. Lister, *Conch. pl.* 682. *fig.* 29.

Hab. Indian Ocean.

The shell contains the soft parts; those of another specimen are also suspended in the same glass.

153 A. Three young specimens of *Cypræa*.

To show the progress of the formation of the shell before the adult state is acquired.

Donor, Henry Salt, Esq.

153 B. *Janthina fragilis*, *Lam. Helix janthina*, *Linn. Gmel.*

Fig. Lister, *Conch. pl.* 572. *fig.* 24.

Hab. The specimen was taken in the Gulf of Guinea; when recent, the shell had many rows of ova attached to its outer surface; these are figured in the *Phil. Trans.* 1817. *pl.* xiii. *fig.* 1—6. *p.* 300.

The anatomy of this species is given by Cuvier in the 11th volume of the *Annales du Muséum*, *p.* 121. *pl.* 11.

Donor, Sir Everard Home, Bart. V.P.R.S.

154. *Janthina globosa*, *Swainson.*

With the soft parts, and the remains of the float.

155 J. B. *Janthina globosa.*

The spire of the shell removed, to show the soft parts.

156. *Trochus Niloticus*, *Linn. Gmel. Lam.*
Fig. Lister, *Conch. pl.* 617. *fig.* 3.
Hab. Indian Ocean.
 The soft parts are suspended.
157. *Turbo Pica*, *Linn. Lam.*
Fig. Lister, *Conch. pl.* 640. *fig.* 30.
Hab. Equatorial Atlantic Ocean.
 The shell is laid open to show the soft parts; the mouth is closed by the operculum.
158. Part of a small *Turbo Pica*.
 Showing the attachment of the operculum to the soft parts.
- 158 A. *Bullæa aperta*, *Lam. Bulla aperta*, *Linn. Gmel.*
Fig. Müller, *Zool. Dan. iii. tab. ci. fig.* 1—5.
Hab. European seas: the specimens are from the coast of Weymouth, Dorsetshire.
 The upper specimen is suspended by the folds of the mantle which cover the shell; in the lower one the calcareous parts of the gizzard are exposed. The anatomy of this species is detailed by Cuvier in the 1st volume of the *Annales du Muséum*, *p.* 156. *pl.* 12. *fig.* 1—6.
Donor, Sir Everard Home, Bart. V.P.R.S.
- 158 B. *Onchidium Typhæ*, *Buchanan, Linn. Trans. v. p.* 132.
Hab. ———
Donor, Sir Everard Home, Bart. V.P.R.S.
- 158 C. *Laplysia camelus*, *Cuv.*
Fig. *Annales du Mus. ii. pl.* 51. (*Laplysia, pl.* 1.) *fig.* 1.
Hab. ———
Mus. Leverianum.
- 158 D. *Laplysia alba*, *Cuv.*
Fig. *Annales du Mus. ii. pl.* 51. (*Laplysia, pl.* 1.) *fig.* 6.
Donor, Sir Everard Home, Bart. V.P.R.S.
159. *Tritonia coronata*, *Lam. Doris coronata*, *Gmel.*
Fig. Bommé, *Mém. de Fless. i. pl.* 3.
Hab. Northern seas.
- 159 A. *Scyllæa pelagica*, *Lam. Linn.*

Fig. Annales du Mus. vii. *pl.* 61. *fig.* 1. 3. 4.

Hab. Northern Ocean.

Donor, Lieutenant Franklin, R.N. 1818.

Class PTEROPODA.

- 159 B. *Limacina helicalis*, *Lam.* *Argonauta arctica*, *Gmel.*

Fig. ———

Hab. Arctic seas, in great abundance.

160. *Clio borealis*, *Lam. Gmel.* Whale's-food.

Fig. Ellis's Zoophytes, *pl.* 15. *fig.* 9, 10. Cuvier, Hist. des Mollusques, *pl.* xvii. Blainville, Malacol. *pl.* 46. *fig.* 1.

Hab. Arctic seas, serving, like the preceding species, as food for the Whalebone Whale.

161. A single specimen of *Clio borealis*, suspended.

- 161 A. Very fine specimens of *Clio borealis*.

Hab. Arctic Ocean.

Donor, Captain Ross, R.N. 1818.

Class CEPHALOPODA.

162. *Octopus vulgaris*, *Lam.* *Sepia octopus*, *Gmel.* Πολύπους anti-quorum. *La Poulpe.*

Fig. Seba, Mus. iii. *tab.* ii. *fig.* 1, 4.

Hab. European seas.

Two small but perfect specimens.

163. A large specimen of *Octopus vulgaris*.

In place of a cretaceous plate, as in *Sepia officinalis*, we find in this genus only two very small elongated horny bodies.

164. *Octopus vulgaris*.

This is the species selected by Cuvier as the type of the structure of the Cephalopoda: see Histoire des Mollusques, *p.* 2, &c.

- 164 A. *Octopus ventricosus*, *Grant, Edinb. Philos. Journal*, xvi. *p.* 309.

Eledone, *Leach, Zool. Miscell.* iii. *p.* 137.

Fig. Pennant, Brit. Zool. iv. *pl.* 28.

Hab. This beautiful specimen was taken at St. Just, Cornwall, January 1822: its arms are compressed, and connected at their roots by a thick web; in the contraction preceding death they have become spirally convoluted in a very elegant manner, the three upper or dorsal pairs describing four gyrations, the ventral pair five: the surface of the integument is slightly wrinkled and granulate; it is of a mottled lilac or livid colour behind, but is smooth and approaches to white on the opposite aspect, and on the arms.

164 B. *Ocythœ Cranchii*, *Leach, Phil. Trans.* 1817. p. 295. pl. 12.

Fig. De Blainville, *Malacologie*, ii. pl. 1 bis. f. 2.

Hab. The specimen was taken in the Gulf of Guinea.

"They had the power of completely withdrawing within the shell, and of leaving it entirely. One individual quitted its shell, and lived several hours, swimming about, and showing no inclination to return into it; and others left the shells as he was taking them up in the net. They changed colour like other animals of the class Cephalopoda; when at rest, the colour was pale flesh-coloured, more or less speckled with purplish; the under parts of the arms were bluish-grey; the suckers whitish."

—Dr. Leach, *ut supra*, p. 294.

Donor, Sir Everard Home.

164 c. *Ocythœ Antiquorum*, *Leach. Argonauta Argo*, *Linn. Lam.*

Fig. De Blainville, *Malacol.* pl. 1. fig. 1. a. b. pl. 1 bis. fig. 1. pl. 1 ter. *Zoological Journal*, iv. pl. 3.

Hab. The specimen was taken in the Mediterranean, and occupies the same position in the shell as it did when it was captured. The animal rests on a mass of ova.

Donor, William John Broderip, Esq. F.R.S. &c. V.P.G.S.

165. *Loligo vulgaris*, *Lam. Sepia Loligo*, *Linn. Le Calmar.*

Fig. Pennant, *Brit. Zool.* iv.

Hab. European seas.

A short arm and the extremity of a long one, to show the acetabula lined with horn and attached by peduncles to these parts.

166. *Loligo sagittata*, *Lam. Var. a. corpore oblongo, crassissimo; brachiis pedunculatis prælongis.*

Fig. Seba, Mus. iii. tab. iv. *fig.* 1. 2.

Hab. European and American Oceans.

The acetabula of the long arms are not confined to the enlarged extremities, but extend to within a short distance of their commencement.

- 166 A. *Loligo sagittata*, Lam. Var. b. *corpore gracili; brachiis pedunculatis perbrevibus.*

Fig. Encycl. Méth. pl. 77. *fig.* 1. 2.

Hab. Mediterranean Sea.

Donor, B. Clifton Henderson, M.D.

- 166 B. *Loligo sepiola*, Lam. *Sepia sepiola*, Linn.

Fig. Encycl. Méth. pl. 77. *fig.* 3.

Hab. Mediterranean Sea.

Donor, Mrs. Robinson.

- 166 c. *Loligo sepiola*, Lam.

Presented by Dr. Leach as his *Sepiola Rondeletii*.

- 166 D. *Loligo Banksii*, Leach, Zool. Misc. iii. p. 141.

Fig. Leach, App. No. ii. Tuckey's Narrative of the Congo Expedition, p. 401. De Blainville, Malacol. ii. pl. 3. *fig.* 1.

Hab. "The colour of this, when alive, is pale flesh. The body is yellowish behind, sprinkled irregularly with blackish spots tinted with purple. The external aspect of the arms is freckled with purplish. The under parts of the fins without spots. One specimen was taken in the Gulph of Guinea."—Leach, App. No. iv. p. 411. Tuckey's Narrative of the Congo Expedition.

The corneous parts of the acetabula at the extremities of the long arms are prolonged into the form of hooks or claws. In the Gallery are preserved parts of the arms of a large but unknown cephalopod, in which the horny parts of the acetabula are in the form of claws, hollow at their base, and supported on soft conical processes. They are imbedded as far as the hooked part in fleshy tubercles about the size of peas, which are arranged in a double alternate series, and attached to the arm by very short and narrow pedicles.—See Nos. 63, 1436, 1437.

Mus. Brookes. See Catal. p. 100. lot 63 Y.

167. *Sepia officinalis*, Lam. Linn. Officinal Cuttle-fish. *La Sèche.*

Fig. Seba, Mus. iii. f. 1—4.

Hab. Mediterranean and European Seas.

The species from which the cuttle-bone is obtained.

Type ACRITA ^a.

Class ENTOZOA, Rudolphi ^b.

Ordo I. NEMATOIDEA (*νημα filum, εἶδος forma*).

Vermes teretes. Rundwürmer. Round worms.

Corpus teres elasticum. Tractus intestinalis hinc ore, illinc ano terminatus. Alia individua mascula, alia feminea.

Ordo II. ACANTHOCEPHALA (*ακανθα spina, κεφαλη caput*).

Vermes uncinati. Hackenwürmer. Hooked worms.

Corpus teretiusculum, utriculare, elasticum. Proboscis seriatim uncinata retractilis. Individua alia mascula, alia feminea.

^a But in genus *Strongylus* the nervous system exhibits traces of the Annulose type: *vide* Otto, in *Der Gessellsch. Naturforschende Freunde Magazin*, vii. Berlin, 1816. p. 225. tab. v. fig. 1.; and *Entoz. Synopsis*, p. 575.

^b The knowledge of the Entozoa or intestinal worms as a Class is of very late date. In the twelfth edition of the *Systema Naturæ*, 1767-8, eleven species only are enumerated:—*Gordius medinensis*, *Ascaris vermicularis*, and *lumbricoides*, with *Fasciola hepatica*, *intestinalis*, and *barbata*, are placed among the *Intestina*; whilst *Hydra hydatula*, *Tænia Solium*, *vulgaris*, *lata*, and *canina*, are ranged with the *Zoophyta*.

Bloch's *Treatise on the Generation of Intestinal Worms*, (*Abhandlung von der Erzeugung der Eingeweidewürmer*, 1782,) succeeded by the more extensive work of Goeze, (*Versuch einer Naturgeschichte der Eingeweidewürmer thierischer Körper*, 1782,) added largely to the number of the described species; and some accurate divisions were also founded. Gmelin, availing himself of the labours of these authors, and collecting also the species described by Redi, Pallas, O. F. Müller, and Werner, was enabled to give two hundred and ninety-nine species in the thirteenth edition of Linné's *Systema Naturæ*; but of this labour Rudolphi remarks: "Gmelinus auctorum plurimorum observationes conguessit, sed tam judicio et experientia quam sollertia destitutus, plurima miscuit et implicuit, ut in synonymis ab eodem perperam allegatis, extricandis, C. A. Rudolphi et Zederus multum desudaverint."

In 1801 Rudolphi's first *Treatise on the Intestinal Worms* appeared in Weidemann's *Archiv für Zoologie und Zootomie*; but previous to this he had made them the subject of two *Theses*: in all these works new species are described, and emendations of classification proposed. In 1808-10 his great work, entitled "*Entozoorum seu Vermium Intestinalium Historia Naturalis*" appeared; in which, after dividing the *Vermes* of Linnæus into four classes, viz. *Mollusca*, *Gymnodela*, *Entozoa*, *Phytozoa*,

Ordo III. TREMATODA (*τρημα foramen, -ωδης -osus; foraminosus.*)

Vermes suctoria. Saugwürmer. Sucking worms.

Corpus depressum vel teretiusculum, molle. Pori suctorii.

Omnia individua androgyna.

Ordo IV. CESTOIDEA (*κεστος cingulum, ειδος forma.*)

Vermes tæniæformes. Bandwürmer. Tape-worms.

Corpus elongatum, depressum, molle, continuum vel articulatum.

Caput paucissimorum simpliciter labiatum, reliquorum bothriis vel osculis suctoriis duobus aut quatuor instructum.

Omnia individua androgyna.

Ordo V. CYSTICA (*κυστις vesica.*)

Vermes vesiculares. Blasenwürmer. Cyst-worms.

Corpus depressum vel teretiusculum, apice posteriore in vesiculam abiens entozois singulis solitariam vel pluribus communem. Caput bothriis (2 vel 4) aut osculis suctoriis (4) uncinulorum corona, vel proboscibus quatuor uncinatis instructum. Organa sexus in nullis hactenus conspicua.

he further characterizes the third class, thus: "Entozoa ergo classem, aut si mavis ordinem sistunt peculiarem, animalcula continentem, aliis in animalibus obvia, oculis nudis conspicua, nervis carentia, partibus internis dissimilibus (discernilibus) instructa." Of the class of animals thus characterized, upwards of eleven hundred species are given in the Entozoorum Synopsis, 1819.

Splendid figures illustrating all the genera in this work have been published by Bremser, (*Icones Helminthum*, 1824,) which leave little to be desired in this respect by the student of Helminthology.

The anatomical structure of this class has been investigated by Tyson (*Phil. Trans.* xiii. 1683),—by Hunter, see in the *Gallery of the Collection*, Nos. 474, 475, 476, 477, 478, 479, 480, 257, 258, 259, 267, 268, 269, 321, 587, 588, 589, (859, 860, 861, 862, 863, 864, Carlisle.) 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2757, 2758, 2759, 2760,—by Sir A. Carlisle (*Linn. Trans.* ii.),—by Cuvier, and the systematic authors previously quoted; and more recently by Jules Cloquet (*Anat. des Vers Intest. Ascaride Lombricoide et Echinorhynque Geant*, 1824).

From the intimate connection subsisting between the study of the Entozoa and the Medical Sciences, more especially Pathology, it has been thought advisable to subjoin the characters of the orders and genera; and there is also added a synoptical table of the specimens contained in this part of the Catalogue.—R. O.

ORDO I. NEMATOIDEA.

Genus I. FILARIA.

Corpus teres, elasticum, subæquale, elongatum. Os orbiculare. Genitale masculinum: spiculum simplex.

167 A. *Filaria medinensis*, Gmel. The Guinea worm.

Hab. In man, in the subcutaneous cellular texture, especially of the lower extremity; peculiar to tropical regions.

Fig. Williams, Observ. on the West Indies. Edinb. 1817. p. 57. tab. 1.

See Hunter on the Blood, 4to. 1794. p. 208.

This specimen, which is twenty-two inches in length, was extracted from the leg of a boy who was a patient in the London Hospital: from the protracted nature of the operation it is necessarily preserved in a dry state.

Donor, Sir William Blizard, F.R.S. &c. July 8th, 1809.

167 B. A fine specimen of *Filaria medinensis*.

Donor, Sir Everard Home, Bart. 1811. (No history.)

167 c. *Filaria gracilis*, Rud. The slender Filaria.

Hab. Was found, May 1829, imbedded and coiled up in a cyst of cellular membrane close by the trachea of a young rufous Oran Otang from India. (*Simia satyrus*, Linn. Cuv.)

Donor, Mr. Richard Owen.

167 D. *Filaria gracilis*.

Fig. Bremser, Icones Helminth. tab. i. f. 1—5.

Hab. These specimens were found in the cavity of the chest, between the pleura pulmonalis and costalis, and convoluted in the intervals of the lobes of the lungs of *Simia capucina*.

Two of the specimens, in length about ten inches, are suspended, the remainder are attached to the lung, which is much disorganized by scrofulous depositions.

Donor, Mr. R. Owen.

168. *Filaria papillosa*, Rud. Fil. Equi, Gmel.

Fig. Bremser, Icon. Helminth. tab. 1. fig. 8—11.

Hab. The species infests the horse; it may be found in the cavities of

the abdomen and chest, behind the peritoneum or pleura, in the aspera arteria, or in the cavity of the eye.

169. *Filaria papillosa*.

A portion of the lung of a horse; one of the bronchial tubes is laid open, and a number of this species of *Filaria* are exposed, coiled up and interwoven together.

- 169 A. The eye of a horse laid open, exposing a *Filaria papillosa*; [which had bred there and occasioned dropsy of the cavity, with absorption of the hyaloid membrane and retina. The choroid has become thick and tough, and slightly granular on its central aspect: on a close inspection it appears to be lined by a thin layer of cellular membrane. A partition of dense cellular membrane, separable into laminæ, stretches across the cavity of the eye behind the lens; the *capsula propria* of which has also undergone morbid thickening and opacity. In the *Synopsis Entozoorum* a case is noticed by Rudolphi, of a *Filaria papillosa* in the right eye of a horse, where its lively motions were observed for some time: the sight was not wholly lost, but the cornea was covered with small opaque spots, the lens and its capsule were destroyed, and the whole eye appeared to be filled with a nebulous humour.]

Donor, Prof. Coleman, 1826.

170. *Filaria Macropi majoris*. (*Sp. dub.*) *Filaria* of the Kangaroo.

Two specimens of this species, between four and five inches in length and a line in thickness, of a yellow colour, and so transparent as to permit two spiral vessels (oviducts?) and a straight tube (digestive canal?) to be plainly seen.

Hab. "Worms found alive within the capsular ligament of the knee-joint of the Kangaroo" written on the bottle.

171. *Filaria Apis terrestris*. (*Sp. dub.*) *Filaria* of the Humble-bee.

Hab. In the cavity of the abdomen of the humble-bee.

172. A Humble-bee laid open to show *Filariæ* in the abdominal cavity.

Mr. Hunter has the following note respecting this species; "Of the animal that breeds in the humble bee:—'In many I have found in their abdomen what I suspect to be of the kind, but of a particular kind, some of which are very small, only to be distinctly seen by a magnifying glass.'"

Genus II. TRICHOSOMA.

Corpus teres, elasticum, tenuissimum, retrorsum insensibili modo increscens. Os punctiforme. Genitale masculum: filum simplex vaginatum.

Genus III. TRICHOCEPHALUS.

Corpus teres, elasticum, parte antica capillari subito in crassiorem transeunte. Os orbiculare. Genitale masculum simplex vaginatum.

173. *Trichocephalus dispar*, Rud. *Trichocephalus Hominis*, Linn.

Hab. The cæcum of Man.

Fig. Goeze, Naturgeschichte der Eingeweidewürmer, t. vi. f. 1—5.

173 A. Many specimens of *Trichocephalus dispar*.

These were found in a living state by Joshua Brookes, Esq., upon and in the cæcum (of a human subject); which was "perforated as it were by a number of pinholes. A considerable portion of the internal coat of the intestine was eroded."

Mus. Brookes. *Vide* Catal. p. 105. lot 41.

174. *Trichocephalus depressiusculus?* Rud. *Trichocephalus Vulpis?* Gmel.

Fig. Bremser, Icon. Helminth. tab. 1. f. 18.

In the specimen, the capillary anterior part is broken off from the rest of the body.

Hab. The species may be found in the cæcum of *Canis familiaris* and *C. Vulpis*.

Genus IV. OXYURIS.

Corpus teres, elasticum, parte postica (feminæ) subulata. Os orbiculare. Penis vaginatus.

Genus V. CUCULLANUS.

Corpus teres, elasticum, postice attenuatum. Capitis ore orbiculari cucullo striato. Genitale masculum: spiculum duplex.

Genus VI. SPIROPTERA.

Corpus teres, elasticum, utrinque attenuatum. Os orbiculare. Penis inter alas caudæ spiraliter devolutæ laterales emergens.

174 A. Spiroptera Hominis, Rud.

Hab. The urinary bladder of Man.

Fig. Medico-Chirurgical Trans., ii. tab. 8.

In the same volume, p. 385, are given a description of the worms and an account of the case, by W. Lawrence, Esq.

"In Canis lupi Januarii d. 22, 1817. Berolini a me dissecti vesica urinaria entozoa reperi, glomere fere inextricabili convoluta, cinerascencia, parti anteriore capillari tenuissima longissimaque sensim in partem crassiorem abeunte, apice caudali obtuse obiter incurvo."—Rudolphi, Entoz. Synopsis, Mantissa 1. p. 222.

Donor, John Barnett, Esq., by Sir Everard Home, Bart. June 14, 1813.

Genus VII. PHYSALOPTERA.

Corpus teres, elasticum, utrinque attenuatum. Os orbiculare. Cauda maris deflexa, utrinque alata, vesicam inferam sistens. Penis tuberculo emissus.

Genus VIII. STRONGYLUS.

Corpus teres, elasticum, utrinque attenuatum. Os orbiculare vel angulatum. Apex caudæ masculæ terminatus bursâ penem emittente.

175. Strongylus armatus, Rud. Strongylus equinus, Gmel. *Var. minor.*

Fig. Bremser, Icones Helminth. tab. iii. fig. 10—15. *Vide* Hodgson, Diseases of Arteries and Veins, p. 569—575.

Hab. In aneurisms of the mesenteric arteries of the horse and ass. *Var. major*, in the large intestines of the same animals.

Two portions of the mesenteric artery of the horse, aneurismatic and diseased, are laid open; showing the heads of the Strongyli buried in flakes of effused lymph or coagulum.

176. Strongylus armatus.

An aneurismatic mesenteric artery of the ass laid open, and exhibiting the Strongyli mixed with coagula and lymph.

176 A. *Strongylus armatus*.

Portions of the mesenteric artery of a young ass, in an aneurismatic and diseased condition. The largest tumour is laid open and is filled with coagula, in which the Strongyli are imbedded.

Fig. Hodgson, Engravings intended to illustrate some of the Diseases of Arteries, 4to. *pl.* viii. *fig.* 2, 3.

Donor, Joseph Hodgson, Esq. 1812.

177. *Strongylus gigas*, *Rud.* *Ascaris renalis*, *Gmel.*

Hab. In the kidney (rarely in any other part,) of Man and other mammifera.

Fig. Rudolphi, Entozoorum Hist. Nat. i. *tab.* ii. *fig.* 1—4.

A specimen eighteen inches long.

177 A. *Strongylus gigas*.

A fine specimen, in length twenty inches, "found in the kidney of a patient of the late Thomas Sheldon, Esq."

Mus. Brookes. See *Catal.* p. 105. lot 52 CE .

178. *Strongylus gigas*.

It is wreathed and imbedded in, and occupies nearly the whole of the kidney of some small quadruped.

178 A. *Strongylus gigas*.

From the kidney of a racoon (*Procyon lotor*). This specimen preserves its natural blood-colour, which is lost in the preceding by long maceration in spirit.

Donor, Dr. Richardson, 1822.

178 B. *Strongylus filaria*, *Rud.*

Hab. In the sheep.

One of the bronchial tubes of a sheep is laid open, and a number of this species exposed. On the cut surface of the lung they may be observed hanging out of the smaller ramifications of the air tubes.

Fig. Bremser, Icon. Helminth. *tab.* iii. *fig.* 26—31.

Donor, Sir Everard Home, Bart.

178 C. *Strongylus inflexus*, *Rud.*

Hab. In the porpesse (*Delphinus Phocæna*).

The specimens were found July 1829, in the pulmonary arteries of a por-

pesse, extending from the trunk to the minute branches. The vessels were in a healthy condition, not presenting any of the morbid appearances observable in the mesenteric arteries of the horse or ass when infested with this genus. (No. 175. 176.)

Donor, Mr. R. Owen, 1829.

178 D. *Strongylus inflexus*.

A portion of the lung of a porpesse, exhibiting a single specimen in one of the extreme branches of the pulmonary artery; none were found in any other part of the lungs of this animal.

Donor, Mr. R. Owen, 1830.

179. *Strongylus minor*, *Kuhn*, *Mém. du Mus.* xviii. p. 363.^a

Hab. In the Porpesse. Numerous specimens from the cavities of the tympanum, of the Eustachian tube, and of the venous sinuses at the base of the brain.

Vide *Gallery*, No. 1622: Dissection of the organ of hearing of a porpesse infested with this species.

180. *Strongylus criniformis*, *Rud.* *Uncinaria Melis*, *Gmel.*

Fig. Goeze, *Naturg. der Eing.* tab. iii. *fig.* 1—4. *Asc. criniformis*.

Hab. The intestines of the Badger (*Meles vulgaris*).

180 A. *Strongylus Vulturis*. *Sp. dub. ore papilloso, parte posticâ crassiore.*

Hab. In a Vulture.

Mus. Brookes. See *Catal.* p. 105. lot 47 Œ.

The "bursa penem emittens" is well shown in the male specimens.

Genus IX. ASCARIS.

Corpus teres, elasticum, utrinque attenuatum. Caput trivalve. Genitale masculum; spiculum duplex.

181. *Ascaris lumbricoides*, *Linn.* *Syn. Engl.* The Round Worm.
Germ. Spulwurm. *Fr.* Lombric. *Ital.* Verme tondo, lombrico.

^a Rudolphi considers this worm a variety only of the preceding species. "*Strongylus inflexus* mihi dictus, quem Klein, Camper, et Albers in Delphini Phocenæ tympani cavo repperunt, a verme quem Amicus modo dictus in ejusdem bestię pulmonibus detexit, vix specie differre videtur." *Entoz. Hist.* Nat. i. p. 348.

- Fig.* Goeze, *Naturg. der Eing. tab. i. fig. 1—3.* *Ascaris Gigas.* Bremser, *Icon. Helminth. tab. iii. fig. 10. 11.* (The head.)
Hab. The small intestines of Man, and also in the intestines of the genera *Sus*, *Bos*, *Equus*, and *Asinus*.
- 181 A. *Ascaris lumbricoides* ;
 longitudinally dissected to exhibit the numerous convolutions of the oviducts. See *Gallery*, No. 2484. 2485.
Fig. Phil. Trans. xii. 1683, *Lumbricus teres*, account of, by Edward Tyson, M.D. *pl.* at p. 161, *fig. 2. 3.* *Cornua uteri (oviducts) in situ, and unfolded.* See Cloquet, *Anat. des Vers Intest. pl. iv.*
Mus. Brit.
- 181 B. *Ascaris lumbricoides* ; *Ascaris megalocephala*, Cloquet.
Hab. The intestines of the Zebra.
 The heads of these specimens very well illustrate the peculiarities observed by Cloquet in the lumbricoid ascarides of the horse. *Anat. des Vers Intest. p. 59.*
Donor, Mr. Cross.
182. *Ascaris marginata*, Rud. *Asc. Canis*, Gmel. *Lumbricus Canis*, Werner.
Fig. Bremser, *Icon. Helminth. tab. iv. fig. 21.*
Hab. The small intestines of the Dog.
 Many specimens mixed with *Tæniæ*. *Vide* No. 219.
183. *Ascaris vermicularis*, Linn.
Fig. Goeze, *Naturg. der Eing. tab. v. fig. 133—137.*
Hab. The large intestines of Man ; especially the rectum of young individuals.
 The rectum of a child inverted near its termination, showing the *Ascarides* firmly attached to the mucous membrane.
184. *Ascaris vermicularis*.
 The rectum of a soldier from Portugal laid open. The mucous coat is much thickened, and is perforated in many places by these *Ascarides*.
- 184 A. *Ascaris spiculigera*, Rud.
Fig. Bremser, *Icon. Helminth. tab. v. fig. 5—8.*

Hab. The œsophagus and proventriculus of the Cormorant (*Phalacrocorax Carbo*).

Mus. Brookes. See Catal. p. 105. lot 48 CE .

184 B. *Ascaris spiculigera*.

The proventriculus and gizzard of a Cormorant, laid open to show these *Ascarides* coiled up and intermixed with flakes of mucus.

Donor, Sir Everard Home, Bart. V.P.R.S. &c.

185. *Ascaris Testudinis terrestris*; an *A. dactylura*, *Rud.*?

Hab. "From the rectum of a land tortoise" on the bottle.

The specimens are exceedingly numerous and small, not more than one-fourth of an inch in length, and of a yellowish hue; extremities equally attenuated. Rudolphi relates, after Redi, that not less than 72,000 of these *Ascarides* were found by the latter in the cæcum of a land tortoise.

185 A. *Ascaris Pythonis*. (*Sp. dub.*)

Many specimens from the stomach of a large serpent (*Python*, *Daudin*), where they were intermixed with *Bothriocephali*. (No. 206 c.) They are between five and six inches in length.

Donor, Mr. Cross.

186. *Ascaris Colubri*. (*Sp. dub.*)

Hab. The stomach of a Coluber.

The *Ascarides* are exposed in situ, of various sizes; a bristle is passed behind some of the largest specimens, which are about two lines in diameter.

187. *Ascaris* ———; *corpore utrinque æqualiter attenuato*.

These specimens are of a deep amber colour, and vary in length from two to four inches.

188. *Ascaris* ———; *parte posticâ crassiore*.

Colour a pale yellow; a few are of the length of four or five inches, the rest scarcely exceed an inch, but seem from their habit to have been from the same animal.

189. *Ascaris* ———; *corpore utrinque æqualiter attenuato*.

About a third of an inch in length, and very pointed at the extremities.

Genus X. OPHIOSTOMA.

Corpus teres, elasticum, utrinque attenuatum. Caput bilabiatum, labio superiore et inferiore.

Genus XI. LIORHYNCHUS.

Corpus elasticum, teres. Caput evalve, oris tubulo emissili, lævi.

189 A. Liorhynchus gracilescens, Rud.

Hab. In the Great Seal (Calocephalus barbatus).

Numerous specimens found in the stomach; some exhibit the *tubulus emissilis*, others are larger and have the habit of ascarides.

Donor, John Edwards, Esq. Surg. R.N.

ORDO II. ACANTHOCEPHALA.

Genus XII. ECHINORHYNCHUS.

(*Character Ordinis etiam ille Generis unici.*)

190. Echinorhynchus porrigens, Rud. Syn.

Fig. Bremser, Icon. Helminth. tab. vii. fig. 1. Rudolphi, Synopsis Entoz. tab. i. fig. 4.

Hab. The intestines of the Whalebone Whale (Balæna Mysticetus).

A portion of intestine, marked "Small Whalebone Whale," to which a number of these Echinorhynchi adhere, their heads being concealed and imbedded in sacculi of the mucous and cellular coats of the gut. For the form of the sacculus and of the animal's head, see *Gallery*, No. $\frac{475}{268}$ et seq., where the Echinorhynchi have perforated both the mucous and muscular coats.

191. Echinorhynchus balanocephalus, R. O. The Acorn-headed Echinorhynchus.

Ech. Proboscide magnâ glandiformi, collo filiformi brevi, corpore anticè crassiore, utrinque obtusissimo.

Long. corp. lin. 7.

Hab. Intestines of Balæna rostrata, Hunter^a: Phil. Trans. 1787.

This species is the *Echinorhynchus Balænæ* of the Hist. Entoz. ii. part 1. p. 304. n. 40, and is there adopted on the authority of Mr. Hunter; but

^a Balænoptera acutirostrata, Lacép.

Rudolphi had not seen the species, and consequently, when he afterwards found *Echinorhynchus porrigens* adhering to the intestines of *Balæna rostrata* in the Anatomical Museum at Berlin, he incorporated the two species (Synops. Entoz. p. 71. n. 34, & p. 324.). By Gmelin, on the other hand, it is confounded with the *Echinorhynchus Anatis mollissima* of Phipps (Linn. Syst. Nat. ed. xiii. vi. p. 3045.), which it somewhat resembles; but from which it differs in having a much larger proboscis, and a body thicker in proportion to its length, and more obtuse at the extremities. This proboscis resembles a minute acorn, but is placed in a reversed position, being connected to the body by a filiform neck proceeding to the apex of the smooth part, while the anterior thicker segment, armed with (12 to 15) series of minute recurved hooks, projects forward and simulates the husk or cup.

192. *Echinorhynchus balanocephalus*.

A large portion of the intestine of a Whale, laid open to show a number of this species attached to the internal surface; where the section is made, the form of the head and depth of the sac containing it may be seen.

193. *Echinorhynchus filicollis*, Rud. *Echinorhynchus borealis*, Gmel.
Sipunculus lendix, Solander, *Phipps's Voyage towards the North Pole*, p. 194.

Fig. Original drawing, No. 69. cube ii. drawer 5. *Phipps's Voyage towards the North Pole*, tab. xiii. f. 1. A. B. C.

Hab. "Found adhering by its small snout to the inside of the intestines of an Eider Duck. Mr. Hunter, who at my request dissected it, informed me that he had seen the same species of animal adhering to the intestines of Whales." p. 194.^a

A large portion of the intestine of *Anas mollissima* with a number of *Echinorhynchi filicolles* adhering to its inner surface. On comparing these specimens with the specific character given by Rudolphi, the terms "*corpore oblongo utrinque obtusissimo*" ought rather to be exchanged for "*corpore oblongo utraque extremitate parum attenuato*."

^a Rudolphi, assuming the word 'species' to have been used by Hunter in the conversation in a rigorous sense, observes: "Hunterus se eandem ac insequentem speciem (viz. Ech. An. moll.) in balæna reperisse Phippsio narravit; hoc tamen vix admiseris; mammalium enim et avium vermes nunquam specie conveniunt." Entoz. Hist. Nat. ii. pl. i. p. 304.

194. *Echinorhynchus flicollis*.

A smaller portion of the intestines of a bird, with the species adhering.

ORDO III. TREMATODA.

Genus XIII. MONOSTOMA.

Corpus molle, teretiusculum vel depressum. Porus anticus solitarius.

Genus XIV. AMPHISTOMA.

Corpus molle teretiusculum. Porus anticus et posticus solitarii.

194 A. *Amphistoma conicum*, Rud.

Hab. The first cavity of the stomach of the Reindeer; adhering to its inner membrane by the larger orifice, which must consequently be considered the anterior, and, as Rudolphi has himself remarked (*Synop.* p. 360), will reverse the character given at p. 91. "*A. corpore tereti, retrorsum increscente obtuso, poris integerrimis, antico minimo, caudali magno.*"

Donor, Mr. Clift.

194 B. A portion of the Reindeer's stomach, with a number of the preceding species adhering to it.

This preparation much resembles a stomach with botts (*Vide* No. 608. 609); and the Entozoa might be mistaken for those larvæ on a superficial inspection.

Donor, Mr. Clift.

195. *Amphistoma subtriquetrum*, Rud.?

Fig. Bremser, *Icon. Helminth. tab. viii. fig. 32. 33.*

Hab. The small intestines, cæcum, and colon of the Beaver (*Castor Fiber*).

Genus XV. DISTOMA.

Corpus molle, depressum aut teretiusculum. Pori solitarii anticus et ventralis.

196. *Distoma hepaticum*, Abildgaard. *Fasciola hepatica*, Linn. The Liver-fluke. *Germ.* Der Leberwurm. *Fr.* La Douve.

Fig. Carlisle, *Trans. of Linn. Soc. ii. tab. xxv. fig. 17—19.*

Hab. In the liver, gall-bladder and ducts of Man and other mammifera,

viz. of the genera Ovis, Capra, Bos, Cervus, Equus, Sus, Lepus, &c.
Most common in the Sheep.

These specimens are from the sheep. In many of them the central convoluted tubes, and vessels radiating to the margin, are filled with dark coagulated fluid.

197. *Distoma hepaticum*, (also from the sheep,) of a darker colour.

198. *Distoma variegatum*, R. O.

Dist. teres, abdomine prominente, anticè ad punctum decrescens, posticè obtusum; poro antico rotundo exiguo, ventrali transverso maximo.

Hab. The gall-bladder of the Wolf-fish (*Anarhichas Lupus*).

This species is of the size of a grain of rice, and of a yellow colour variegated with black. It differs from the *Distoma incisum* of Rudolphi (*Entoz. Hist. Nat. ii. pars i. p. 361.*) in the roundness of its form, and in its pointed anterior extremity.

199. *Distoma lineare*, Rud. *Fasciola trachea*, Montagu.

Fig. Trans. of Wernerian Society, i. *pl.* 193. *fig.* 4.

Hab. The trachea of the Domestic fowl and of the Partridge (*Perdix cinerea*). Several specimens from the trachea of a chicken.

200. *Distoma lineare*.

A small portion of the trachea of a bird laid open, and exhibiting one of this species, which has lost its original pink colour, and become blanched in the spirit. The anterior orifice is slightly sexpartite; the ventral foramen is produced on a long capillary stalk, thinner in proportion than that of the *Distoma furcatum* of Bremser; in this example it projects forward unattached to the trachea.

201. *Distoma lineare*.

It is this species of Fluke that occasions the fatal distemper in young chickens and pheasants, usually termed the gapes: after death, the trachea is found to be completely choked up by them, as in the present specimen from the partridge.

202. *Distoma Hydrophidis*. (*Sp. dub.*)

Hab. "Taken out of the ovarium of a Water-snake."—Old Catal.

Genus XVI. TRISTOMA.

Corpus depressum. Pori duo antici simplices, tertius posticus radiatus. Inter illos os, proboscidem? emittens.

Genus XVII. PENTASTOMA.

Corpus teretiunculum vel depressum. Os inter poros utrinque binos, hamulum emittentes, lunatim positos.

Genus XVIII. POLYSTOMA.

Corpus teretiunculum vel depressum. Pori sex antici, ventralis et posticus solitarii.

ORDO IV. CESTOIDEA.

Genus XIX. CARYOPHYLLÆUS.

Corpus depressum, continuum. Caput dilatatum fimbriatum, bilabiatum, labio superiore et inferiore.

Genus XX. SCOLEX.

Corpus depressum, continuum. Caput bothriis quatuor instructum.

Genus XXI. GYMNOTRYPHUS.

Corpus depressum, continuum, longissimum, colli receptaculo subgloboso. Caput bothriis duobus bipartitis instructum, proboscides quatuor nudas retractiles emittens.

Genus XXII. TETRATRYPHUS.

Corpus depressum, continuum. Caput bothriis duobus bipartitis instructum, proboscides quatuor uncinatas retractiles emittens.

Genus XXIII. LIGULA.

1. *Statu ante evolutionem*^a: *Corpus depressum, continuum, longissimum, sulco longitudinali medio exaratum. Neque capite neque genitalibus conspicuis.*

^a The *status ante evolutionem* is that state in which the Ligula exists while in the abdominal cavity of the fish which it infests: the *status evolutus* appears in the Ligulæ of the intestines of birds and mammalia that prey on fish; and is conjectured by Rudolphi to be produced by the increased warmth and space experienced by the entozoon after its change of habitat, from the abdomen of the fish to the bowels of the animal that has devoured it.—*Synops. Entoz.* p. 459—596.

2. *Statu evoluto: Corpus depressum, continuum, longissimum. Caput bothrio utrinque simplicissimo. Ovaria serie simplici aut duplici cum lemniscis in lined mediand.*

203. *Ligula Cyprini. Ligula abdominalis, Gmel.*

Fig. Bremser, Icon. Helminth. tab. xii. fig. 1—3. Ligula simplicissima ex Cyprino Bramâ? (Bream).

Hab. The cavity of the abdomen of species of the genus Cyprinus.

Genus XXIV. TRIÆNOPHORUS.

Corpus elongatum, depressum, subarticulatum. Os bilabiatum, utrinque aculeis binis tricuspidatis armatum.

203 A. *Triænophorus nodulosus, Rud.*

Fig. Bremser, Icon. Helminth. tab. xii. fig. 4—16.

Hab. This specimen is from the stomach of the Haddock (Gadus Æglefinus); it is also found in Gadus Lota, Perca fluviatilis, and Esox Lucius.

Donor, Mr. Clift.

Genus XXV. BOTHRIOCEPHALUS.

Corpus elongatum, depressum, articulatum. Caput subtetragonum, bothriis duobus vel quatuor oppositis.

204. *Bothriocephalus latus, Bremser. Tænia lata, Linn. The Tape-worm. Germ. Der Bandwurm. Fr. Le Ténia, Le Ver plat.*

Fig. Carlisle, Linn. Trans. ii. tab. xxv. fig. 12—14. Jördens, Helminthol. tab. iv. fig. 1—4. Tænia vulgaris, fig. 5—10. Tænia lata.

Hab. The intestines of Man: prevalent in Switzerland and France; more frequent in Russia than Tænia Solium; very rare in England, Germany, and Holland.

The present specimen is figured in an original drawing (No. 71. cube ii.).

It was expelled from the intestines of Marian Burgoyne, a native of Lausanne, in Switzerland. An abstract of her case is published in a paper "On the Structure and Economy of Tæniæ," by Sir Anthony Carlisle, Trans. of the Linn. Soc. ii. p. 247.

205. A portion of *Bothriocephalus latus* :

From the same person, but voided some time before the last.

206. *Bothriocephalus latus* :

Also a portion from the same person, probably voided at another period.

206 A. *Bothriocephalus punctatus*, *Rud.*

Fig. Müller, Zool. Dan. *tab.* xliv. *fig.* 5—11.

Hab. In the Turbot (*Pleuronectes maximus*).

Many specimens from the stomach and intestines.

Donor, Mr. Clift.

206 B. *Bothriocephalus macrocephalus*, *Rud.*

Fig. Bremser, Icon. Helminth. *tab.* xiii. *pl.* 12. 13.

Hab. The specimens are from the stomach of the Greenland Dove (*Columbus Arcticus*).

Mus. Brookes. See *Catal.* p. 105, lot 45 CE.

206 C. *Bothriocephalus Pythonis*. (*Sp. dub.*)

Hab. From the intestines of a large serpent, ten feet in length, called at Exeter 'Change Boa Constrictor, but which belonged to the genus *Python* of Daudin.

The specimens are from fifteen to thirty inches in length, composed of very numerous joints, of about a line in length, but varying in this respect according to the state of contraction in the part. The margins of the body are serrated, the general breadth being about two lines, but gradually narrowing anteriorly to about half a line, and then again becoming a little wider towards the head. This part is composed of two suckers of large size and oval shape, the orifices of which are terminal and transverse. These parts, and the lateral and transverse vessels may be seen injected with mercury in Preparations No. 479 A. 865 A. Gallery Series.

Donor, Mr. R. Owen.

206 D. A smaller variety of the *Bothriocephalus Pythonis*.

Immense numbers were found inextricably twined together, and forming a large ball in the stomach of a *Python*. A group with the heads perfect is suspended in the glass; many *Ascarides* (No. 185 A.) were mixed with these.

Donor, Mr. Cross.

Genus XXVI. TÆNIA.

Corpus elongatum, depressum, articulatum. Oscula capitis quatuor suctoria.

A. Inermes. a. capite simplici.

207. *Tænia denticulata*, Rud. *Tænia* β Bovis, Gmel.

Fig. Original Drawing, (No. 70. cube ii. drawer 5.) W. Bell. Carlisle,
Linn. Trans. ii. tab. xxv. fig. 15. 16.

Hab. The intestines of the genus Bos.

In this beautiful specimen from the Ox, the head is perfect.

208. *Tænia denticulata*.

A larger specimen than the preceding, but without the head.

209. *Tænia denticulata*.

A fine specimen, with the head perfect, but it is discoloured from having been disposed on black pasteboard.

210. *Tænia plicata*, Rud. *Tænia magna*, T. Equi, Gmel.

Fig. Bremser, Icon. Helminth. tab. xv. fig. 1.

Hab. The small intestines of the Horse.

Of this species the bottle contains many broken portions, the heads being deficient; also fragments of *Tænia Solium*, which are readily distinguishable from the preceding by the length of the joints.

211. *Tænia perfoliata*, Goeze. *Tænia quadriloba*, T. equina, Gmel.

Fig. Bremser, Icon. Helminth. tab. xv. fig. 2. 3. 4.

Hab. The cæcum and colon of the Horse.

Five different-sized specimens of this remarkable species are disposed upon stiff paper.

211 A. *Tænia anthocephala*, Rud. *Tænia Phocæ*, Gmel.

Fig. Fabricius, in Dansk. Selsk. Skrivt. i. 2. tab. x. fig. 3.

Hab. The rectum of the Great Seal (*Calocephalus barbatus*).

Donor, John Edwards, Esq. Surg. R.N.

212. *Tænia Omphalodes*, Hermann.

Fig. Hermann im Naturforscher, tab. ii. fig. 1. a.—d.

Hab. The intestines of the Short-tailed Field-mouse (*Arvicola vulgaris*).

β. Rostellatæ.

213. *Tænia pusilla*, Goeze. *Tænia cateniformis* Glirium, Gmel.

Fig. Goeze, Naturg. der Eing. tab. xxiii. fig. 5. 6.

Hab. The small intestines of the Mouse (*Mus Musculus*) and Rat (*Mus Rattus*).

Some of the specimens only are perfect.

B. Armatæ.

214. *Tænia Solium*, Linn. The single Tape-worm. *Fr.* Le Solitaire.

Fig. Carlisle, Linn. Trans. ii. tab. xxv. fig. 1—8. Werner, Brev. Expos. tab. i.—iii. fig. 1—46.

Hab. The small intestines of Man. Prevalent in England, Germany, and the East; in France promiscuously with *Tænia lata*; in Switzerland less common than the latter.

In two or three of these specimens the head is complete, and in many of the joints, the vessels are filled with dark coagulated fluid, some partially, others more completely. This circumstance led the celebrated Goeze to describe the vascular structure as varying in the different joints, a mistake which was rectified by Sir A. Carlisle, whose successful injections of these minute parts demonstrate the great regularity of the arrangement of these canals in all the joints.—See Gallery, No. 860—865.

215. *Tænia Solium*.

A portion extended on card; the lateral orifices very obvious.

216. Two joints of the *Tænia Solium*.

The lower one is four inches and a half in length, and three-fourths of an inch across at the broadest part, with a number of orifices in unequal series on either side. These varieties are occasionally observed in the segments of *Tænia Solium*; sometimes their breadth greatly exceeds their length, and with proportionate thickness; at other times they are much elongated, as in the present instance. (Vide *Andry, Vers solitaires*.) Rudolphi^a possesses four of this species that were simultaneously expelled from the same individual.

^a "Vermem solitarium non esse, ideoque Solii nomen non quadrare, nunc quidem neminem latet; ipse quatuor specimina capite instructa ab eodem homine simul dejecta possideo." *Hist. Nat. Ent.* ii. b. p. 163.

217. *Tænia Solium* ;
which has tied itself at one part into a knot.
218. *Tænia marginata*? *Batsch, Bandwürm, p. 125. n. 4. Tænia cateniformis Lupi, Gmel.*
Fig. Goeze, *Naturg. der Eing. tab. xxii. A. fig. 1—5.*
Hab. Intestines of the Wolf (*Canis Lupus*).
Broken portions without head or tail.
- 218 A. *Tænia serrata, Goeze, Naturg. p. 337. var. α Canis, Gmel.*
Fig. Werner, *Brev. Expos. tab. iii. fig. 70—76.*
Hab. Small intestines of the Dog ;—a single and entire specimen, which extended nearly the whole length of the duodenum, jejunum, and ilium.
Donor, Mr. Clift, 1803.
- 218 B. *Tænia serrata.*
Smaller specimens of this species from the stomach and intestines of a large dog.
Donor, Mr. Clift, 1807.
219. *Tænia serrata.*
Vide Hunter on the Blood, &c. 4to, p. 302. “A bitch voided some single tape-worms after having tartar emetic injected into the veins.”
220. *Tænia crassicollis, Rud. Tænia serrata β Felis, Gmel.*
Fig. Bremser, *Icon. Helminth. tab. xvi. fig. 1—6.*
Hab. The small intestines of the Domestic Cat.
A small but perfect specimen.
221. *Tænia crassicollis.*
The head and anterior part of the body are displayed on dark paper.
222. *Tænia crassicollis.*
A portion of small intestine of a domestic cat, containing a number of this species. They are sometimes discharged by the mouth.

ORDO V. CYSTICA.

Genus XXVII. ANTHOCEPHALUS.

(*Vesica externa dura elastica, continens alteram tenuiorem, in quâ entozoon solitarium, cujus*)

Corpus elongatum depressum, basi in vesicam abit caudalem ampliata. Caput (Tetrarhynchi) bothriis (2 vel 4) et proboscibus uncinatis (4) instructum.

222 A. Anthocephalus macrourus, Rud. Anth. à queue longue.

Fig. Bremser, Icon. Helminth. tab. xvii. fig. 1. 2.

Hab. In the genus Sparus.

Two specimens: in one the head and neck are protruded from the cyst, in the other they are withdrawn into it and are exposed in situ.

Donor, Mr. Clift.

Genus XXVIII. CYSTICERCUS.

(*Vesica externa simplex, continens entozoon solitarium, cujus*)

Corpus teretiunculum vel depressum abiens in vesicam caudalem. Caput (Tæniæ armatæ) osculis suctoriis quatuor, rostelloque uncinato instructum.

222 B. Cysticercus fasciolaris, Rud. Tænia hydatigena, Gmel.

Fig. Bremser, Icon. Helminth. tab. xvii. fig. 3—9.

Hab. The liver of the Glires and Vespertiliones.

The liver of a mouse (*Mus Musculus*), entirely occupied by cysts containing this species of hydatid.

Donor, Sir Everard Home, Bart. 1818.

222 C. Cysticercus fasciolaris.

The liver of a rat (*Mus Rattus*), with two cysts; each containing a hydatid of this species.

Donor, Mr. R. Owen, 1830.

223. Cysticercus tenuicollis, Rud. Hydra hydatula, Linn. Tænia globosa, Gmel. Tænia hydatigena, Pallas. Oval hydatid with a neck.

Fig. Pallas, Miscell. Zool. p. 157. tab. xii. fig. 1—11.

Hab. Pleura and peritoneum of the Ruminants and the Sow.

224. Cysticercus tenuicollis.

Hab. "Hydatid from the belly of a sheep." A bristle is passed into the cavity of the cyst.

Vide Bremser, *Icon. Helminth. tab. xvii. fig. 10. 11.*

225. A semitransparent cyst containing *Cysticercus tenuicollis*.

226. *Cysticercus Cellulosæ*, *Rud.* *Tænia Cellulosæ*, *Gmel.* Hydatid Finna, *Blumenbach.* Hydatid of measly pork.

Fig. Jördens, *Helminth. ii. tab. v. fig. 12—16.* *Tænia muscularis.*

Hab. In the intermuscular cellular substance and occasionally the brain of Man; but more common in the Hog, occasioning that state of the muscles called "measly pork."

Portion of the heart of a domestic Hog, beset with cysts externally and in its substance; some containing a hydatid of this species; others empty, the animal having fallen to the bottom of the glass.

227. *Cysticercus Cellulosæ.*

A portion of the heart of a Hog, similarly diseased and beset with these hydatids, but not in so great a degree. See Pathological Series, No. 556.

Rudolphi relates that *Cysticercus Cellulosæ* is occasionally found in the muscular parts of human leucophlegmatic subjects; and that he once detected it in the substance of the heart and in various parts of the brain of a female subject.—*Synops. Entoz. p. 546.*

Genus XXIX. CŒNURUS.

Vesica simplex, in quam desinunt plurima Entozoa, quorum Corpus elongatum, depressiusculum, rugosum; Caput (Tæniæ armatæ) rostello uncinato quatuorque osculis suctoriis instructum.

228. *Cœnurus cerebralis*, *Rud.* *Tænia cerebralis*, *Gmel.* Brain-hydatid of giddy sheep.

Fig. Bremser, *Icon. Helminth. tab. xviii. fig. 1. 2.*

Hab. The brain of the Sheep.

For appearances in the brain, see Pathological Series, No. 552. 553.

229. *Cœnurus cerebralis*, artificially attached to its cyst.

The vermiculi were considered by Mr. Hunter as the ova or young of the hydatid: but they appear to be perfect animals, living in society attached to a common cyst; and have each a head provided with hooks and suctorious orifices, as in the armed *Tæniæ*.

Genus XXX. ECHINOCOCCUS.

Vesica externa simplex vel duplex, cujus superficiei internæ insident entozoa plurima, arenulam mentientia, quorum

Corpus obovatum; Caput (Tæniæ armatæ) uncinorum corona et osculis suctoriis instructum.

230. *Echinococcus Hominis*, Rud. *Polycephalus Hominis*, Goeze.

Fig. Rudolphi, Entoz. Hist. Nat. tab. xi. fig. 4.

Hab. The liver and other viscera of Man. "Hydatids, on the inside of which are small ones; human; two preparations." Old Catal. See Pathological Series, No. 565. 566.

The coats of the cyst are yellowish and semitransparent, and the vermiculi resemble small grains of sand.

231. *Echinococcus Veterinorum*, Rud.? *Tænia granulosa*, Gmel.

Fig. Bremser, Icon. Helminth. tab. xviii. fig. 3—13.

Hab. In the viscera of the sheep. See Pathological Series, No. 592: a cyst containing the same species, from the kidney of a sheep.

Vide Phil. Trans. 1706. p. 2304, tab. i. fig. 1. 2. 3. "Of Hydatides inclosed with a stony crust in the kidney of a sheep." By W. Cowper, F.R.S.

232. Cyst containing "a hydatid from a sheep." (*Sp. dub.*)233. The cyst of an *Echinococcus*.

Hab. "Animal hydatid in the human lungs."—Old Catal.

234. Globular cysts of various sizes; part of a prodigious number which were found in a sac in the liver, and dispersed through the cavity of the abdomen of a human dropsical subject.

These cysts, being unprovided with heads and hooks, exhibiting no independent motions, nor containing any organized vermicular bodies, are excluded by Rudolphi* from his system, and, as individuals, from the animal kingdom.

They are called *Acephalocysts* by Dr. Laennec, and spurious hydatids by some pathological authors.

* "Mihi quidem ea tandem hydatidis animal vivum vocatur, quæ vitam propriam degit, uti *Cysticerci*, *Cœnuri*, etc. Quæ autem organismi alieni (v. c. humani) particulum efficit, animal me judice dici nequit. Mortua non est, quamdiu organismi partem sistit, uti etiam ulcus, pustula, efflorescentia; sed hæc ideo non sunt animalia."—*Synops. Entoz.* p. 551.

TABLE of the Animals and the Situation in which the preceding ENTOZOA
were found.

ENTOZOA.	HOMO.	SITUS.
<i>Filaria medinensis.</i>		Subcutaneous cellular texture.
<i>Trichocephalus dispar.</i>		Cæcum.
<i>Spiroptera Hominis.</i>		Urinary bladder.
<i>Ascaris lumbricoides.</i>		Small intestines.
<i>Ascaris vermicularis.</i>		Rectum.
<i>Strongylus Gigas.</i>		Substance of the kidney.
<i>Bothriocephalus latus.</i>		Intestines.
<i>Tenia Solium.</i>		Small intestines.
<i>Echinococcus Hominis.</i>		Liver encysted.
<i>Acephalocysts.</i>		Liver, and cavity of abdomen.

PITHECUS SATYRUS.

<i>Filaria gracilis.</i>	Cellular texture.
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CEBUS CAPUCINUS.

<i>Filaria gracilis.</i>	Cavity of the chest.
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CANIS FAMILIARIS.

<i>Trichocephalus depressiusculus.</i>	Cæcum.
<i>Ascaris marginata.</i>	Small intestines.
<i>Tenia serrata.</i>	Small intestines.

CANIS LUPUS.

<i>Tenia marginata.</i>	Intestines.
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FELIS CATUS, DOMESTICUS.

<i>Tenia crassicollis.</i>	Small intestines.
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PROCYON LOTOR.

<i>Strongylus Gigas.</i>	Kidney.
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MELES TAXUS.	
ENTOZOA.	SITUS.
<i>Strongylus criniformis.</i>	Intestines.
MACROPUS MAJOR.	
<i>Filaria.</i>	Capsular ligament of the knee-joint.
CASTOR FIBER.	
<i>Amphistoma subtriquetrum.</i>	Intestines.
ARVICOLA VULGARIS.	
<i>Tænia omphalodes.</i>	Intestines.
MUS RATTUS.	
<i>Tænia pusilla.</i>	Small intestines.
<i>Cysticercus fasciolaris.</i>	Liver.
MUS MUSCULUS.	
<i>Cysticercus fasciolaris.</i>	Liver.
SUS SCROFA, DOMESTICUS.	
<i>Cysticercus Cellulosæ.</i>	Heart.
CERVUS TARANDUS.	
<i>Amphistoma conicum.</i>	First cavity of the stomach.
OVIS ARIES.	
<i>Strongylus filaria.</i>	The bronchial tubes.
<i>Distoma hepaticum.</i>	Gall-bladder and ducts.
<i>Cysticercus tenuicollis.</i>	Peritoneum.
<i>Cænurus cerebialis.</i>	Brain.
<i>Echinococcus Veterinorum.</i>	Kidney.
BOS TAURUS, DOMESTICUS.	
<i>Tænia denticulata.</i>	Intestines.

EQUUS CABALLUS.

ENTOZOA.

SITUS.

<i>Filaria papillosa.</i>	Trachea. Eye.
<i>Strongylus armatus.</i>	Mesenteric arteries.
<i>Tænia plicata.</i>	Small intestines.
<i>Tænia perfoliata.</i>	Cæcum and colon.

EQUUS ASINUS.

<i>Strongylus armatus.</i>	Mesenteric arteries.
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EQUUS ZEBRA.

<i>Ascaris megalcephala.</i>	Intestines.
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CALOCEPHALUS BARBATUS.

<i>Liorhynchus gracilescens.</i>	Stomach.
<i>Tænia anthocephala.</i>	Rectum.

BALÆNA MYSTICETUS.

<i>Echinorhynchus porrigens.</i>	Small intestines.
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BALÆNOPTERA ACUTIROSTRATA^a.

<i>Echinorhynchus balanoccephalus.</i>	Intestines.
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PHOCÆNA COMMUNIS.

<i>Strongylus inflexus.</i>	Pulmonary arteries.
<i>Strongylus minor.</i>	Tympanum, Eustachian tube, &c.

VULTUR.

Strongylus ———.

PHASIANUS GALLUS.

<i>Distoma lineare.</i>	Trachea.
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PERDIX CINEREA.

<i>Distoma lineare.</i>	Trachea.
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COLYMBUS ARCTICUS.

<i>Bothriocephalus macrocephalus.</i>	Stomach.
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^a Balæna rostrata, Hunter.

PHALACROCORAX CARBO.

ENTOZOA.

SITUS.

Ascaris spiculigera. Œsophagus and proventriculus.

ANAS MOLLISSIMA.

Echinorhynchus filicollis. Intestines.

TESTUDO TERRESTRIS.

Ascaris. Rectum.

PYTHON TIGRIS.

Ascaris. Stomach.*Bothriocephali.* Stomach and intestines.

COLUBER.

Ascaris. Stomach.

HYDROPHIS.

Distoma. Ovarium.

ANARHICHAS LUPUS.

Distoma variegatum. Gall-bladder.

GADUS ÆGLEFINUS.

Trienophorus nodulosus. Abdomen.

PLEURONECTES MAXIMUS.

Bothriocephalus punctatus. Stomach and intestines.

SPARUS.

Anthocephalus macrourus. Abdomen.

CYPRINUS.

Ligula. Abdomen.

APIS TERRESTRIS.

Filaria. Abdomen.

Type ANNULOSA^a

Class ANNELIDA.

ORDO I. CRYPTOBRANCHIA.

(Filiformia.)

235. *Gordius aquaticus*, Linn. *Dragoneau des Sources*, Fr.

Fig. Shaw, Nat. Miscell. iv. *pl.* 121. *Encycl. Méth.* *pl.* 29. *fig.* 1.

Hab. The sand of fresh waters, rivers, springs, &c., which it perforates in every direction.

The extremity by which it is suspended is slightly bifid.

236. *Gordius aquaticus*.

The light-coloured one with the bifid extremity is "from Thames water."

- 236 A. *Hirudo medicinalis*, Linn. *Sanguisuga medicinalis*, Sav. The Medicinal Leech.

Fig. Leach, *Encycl. Brit. Suppl.* i. *pl.* 26. *fig.* 2.

Hab. Europe. In the waters of marshes and slow running streams.

See *Gallery*, No. 327. 330. 918. 1294, &c.—dissections of this species.

- 236 B. *Hirudo*.

Small specimens, gradually tapering to the head, of a light-brown colour, and not exceeding an inch and a half in length.

Presented by Dr. John Davy as the "Ceylon Leech, which is so troublesome in that island, to which it is almost peculiar."

237. *Hæmocharis Piscium*, Sav. *Hirudo geometra*, Linn. Smooth Sea Leech.

Fig. Pennant, *Brit. Zool. tab.* xxi. *fig.* 3.

Hab. Northern Ocean, attached to fish.

- 237 A. *Albione muricata*, Sav. *Hirudo muricata*, Linn. *Pontobdella muricata*, Leach, *Zool. Miscell.* ii. *p.* 9. The Skate Sucker.

Fig. Baster, *Opusc. Subs.* ii. *tab.* x. *fig.* 2.

^a Nervous system ganglionic, with the ganglions arranged in a series and brought into communication by a double nervous chord.

Hab. European Ocean; adhering to fish.

Mus. Brookes. *Catal.* No. 1 y.

(*Lumbricidæ.*)

- 237 B. *Lumbricus terrestris*, *Linn.* *Enterion terrestris*, *Sav.* Earth-worm.

See *Gallery*, No. 920. 1295. 2125.—dissections of this species.

ORDO II. GYMNOBRANCHIA.

(*Serpulidæ.*)

238. *Serpula vermicularis*, *Linn.* *Sav. Syst. des Annelides*, p. 73. *Vermicular Serpula.*

Fig. Müller, *Zool. Dan. tab. lxxxvi. fig. 7. 9.*

Hab. European Seas.

Many small specimens irregularly contorted on a fucus stalk.

- 238 A. *Serpula spirorbis*, *Müller.* *Sav. Spirorbis nautiloides*, *Lam.* *Spirorbe Serpula.*

Fig. Müller, *Zool. Dan. tab. lxxxvi. fig. 1—6.*

Hab. Northern Seas; in this instance attached to various parts of the body of *Arcturus tuberculatus*, *Latr.* See No. 331 A.

Donor, Alexander Fisher, Esq. Surg. R.N.

239. *Serpula costalis*, *Lam.*

Hab. ———

240. *Serpula gigantea*, *Pallas, Miscell. Zool. p. 139.* *Sav. Terebella bicornis?* *Gmel.* *Animal Flower, of Home.*

Hab. Coast of Barbadoes.

This specimen is removed from its tube, the alimentary canal is exposed, and a bristle passed into the anus.

241. *Serpula gigantea.*

The opercular process (*tuba*, *Pallas*) is entire, and the small tentacles like the horns of a stag, which it supports, are well displayed.

Fig. *Seba*, iii. *tab. xvi. fig. 7.* *Penicillum marinum*; and i. *tab. xxix.*

fig. 1. 2. *Urtica marina singularis?* Pallas, Miscell. Zool. p. 139. tab. x. fig. 2—10. Abildgaard, in Schriften der Gesell. Naturf. Freunde. Berlin, ix. tab. iii. fig. 4?^a Described by Home as a species of Actinia or Animal Flower, and figured in the Transactions of the Royal Society, lxxv. tab. xi. p. 344; and in the Lectures on Comp. Anat. ii. tab. i. This figure is copied by Dr. Shaw into the Naturalist's Miscellany, viii. pl. 290, and there called *Terebella Madreporarum*.

(*Amphitritidæ*.)

242. *Sabella alveolata*, Linn. *Hermelia alveolata*, Sav. *Amphitrite alveolata*, Cuvier.

Fig. Pennant, Brit. Zool. iv. tab. xcv. Ellis's Corallines, pl. 36. *Tubularia arenosa Anglica*.

Hab. European Seas.

- 242 A. *Terebella conchilega*, Gmel.

Fig. Pallas, Miscell. Zool. tab. ix. fig. 14—22.

Hab. Northern Seas.

The Glass contains the tube only. *Vide* Gallery, No. 2808. 2809.

Donor, Alexander Fisher, Esq. Surg. R.N.

- 242 B. Tubes, formed as in the preceding specimen, of fragments of shell and sand agglutinated together.

Hab. Northern Seas.

Donor, Captain Buchan, R.N.

- 242 c. *Amphitrite auricoma*, Müller. *Amphictene auricoma*, Sav.

Fig. Müller, Zool. Dan. tab. xxvi. Pallas, Miscell. Zool. tab. ix. fig. 3—5.

Nereis cylindrica Belgica.

Hab. Sandy shores of Britain: the specimen is from the coast at Little Hampton, in Sussex. This species is remarkable for the delicate texture of its tube, and the brilliant golden hue of the ciliæ, arranged like the teeth of a comb above the mouth. It is made a distinct genus by

* The *Terebella bicornis* of Abildgaard is considered by Savigny, on account of its slender opercular pillar and circular disk, as a species distinct from the one under consideration; but these differences, on a comparison of the specimens with the figures quoted, can scarcely be appreciated.

Leach, under the name Cistena ; by Lamarck, under the name Pectinaria ; and by Savigny, under that of Amphictene.

Donor, John Abernethy, Esq. F.R.S.

243. Amphitrite Penicillus, *Lam.* Sabella pavonia, *Sav.*

Fig. Müller, Zool. Dan. tab. lxxxix. fig. 1. 2. *Tubularia penicillus.*

Hab. Northern Seas.

The spirit has blanched the body and branchial cirri, which have naturally a reddish tinge.

244. Amphitrite ventilabrum, *Gmel.* Sabella ventilabrum, *Sav.*

Fig. Ellis's Corallines, pl. 34. *Corallina tubularia Melitensis.* Encyclop.

Méth. pl. 59. Amphitrite Pinceau.

Hab. Mediterranean Sea.

A small specimen, removed from its tube.

245. Amphitrite ventilabrum, *Gmel.*

A fine specimen, in its tube. Of this genus are No. 607 and 1006, Gallery.

The former without doubt Amphitrite ventilabrum.

(*Telethusidæ.*)

- 245 A. Arenicola Piscatorum, *Cuv. Sav.* Lumbricus marinus, *Linn.*

The Sand-worm.

Fig. Müller, Zool. Dan. tab. clv. fig. 1. bis. *Lumbricus marinus.*

Hab. Very common on sandy coasts, burying itself deep, but its retreat is generally distinguishable by a little coil of sand. The present specimen was taken on the shore at Dover, and presented by John Abernethy, Esq. F.R.S.

246. Arenicola Piscatorum.

Fig. Encyclopædia Britannica, Suppl. art. Annulosa. tab. xxvi. *Arenicola carbonaria.*

Hab. Europe ; in the sand, and under stones along the sea-shore : sought after by fishermen for baits.

247. Amphinome capillata, *Bruguère, Encycl. Méth.* Chloeia capillata, *Sav.* Terebella flava, *Gmel.*

Fig. Pallas, Miscell. Zool. tab. viii. fig. 7—11.

Hab. Indian Ocean.

The natural brilliant yellow hue of the lateral hairs is lost by long maceration.

248. *Amphinome carunculata*, Brug. *Pleione carunculata*, Sav. *Nereis gigantea*, Linn.

Fig. Seba, ii. *tab.* lxxxi. *fig.* 7. *Millepeda marina Amboinensis?* Pallas, *Miscell. Zool. tab.* viii. *fig.* 12. 13. *Aphrodita carunculata*.

Hab. Coasts of South America.

A remarkably fine specimen, exceeding a foot in length.

- 248 A. *Amphinome carunculata*.

A smaller specimen; the shining hairs of the ventral pediform papillæ are retracted. See *Gallery*, No. 606. Digestive canal exposed.

Mus. Brookes. *Catal.* p. 100. lot 57 v.

- 249 J. B. *Amphinome tetraëdra*, Brug. *Pleione tetraëdra*, Sav. Four-sided *Amphinome*.

Fig. Pallas, *Miscell. Zool. tab.* viii. *fig.* 14—18. *Aphrodita rostrata*.

Hab. Indian Ocean.

250. *Amphinome tetraëdra*, with the proboscis exerted.

- 251 J. B. *Amphinome complanata*, Brug. *Pleione complanata*, Sav. *Terebella complanata*, Gmel.

Fig. Pallas, *Miscell. Zool. tab.* viii. *fig.* 19—26. *Aphrodita complanata*.

Hab. American Ocean.

252. *Amphinome* ———.

A small specimen, much contracted by the spirit.

(*Eunicidæ*.)

253. *Leodice gigantea*, Sav. *Eunice gigantea*, Cuv.

Fig. Pallas, *Nova Acta Petrop.* ii. p. 229. *tab.* v. *fig.* 1—7. (but figures 2. 3. 4. and 5. exhibit six antennæ.)

Hab. Tropical Seas.

- 253 A. *Leodice gigantea*.

This extraordinary specimen, the largest on record, is ten feet in length, notwithstanding some segments are wanting from either extremity.

Hab. Bermuda. "It was taken in the sea under a stone, in repairing a wharf; and I am sorry to say that the head and tail, together with a part of the body, were destroyed in taking it; I am told what was saved of it measured twelve feet nine inches. It was immediately put into spirits, and when brought to me several hours afterwards, it measured nearly ten feet. The insect is very rare in these Islands (Bermuda), and was never known to exceed twenty inches, or two feet."—Letter from James Christie Esten, Esq. to Sir Everard Home, Bart., with the specimen, dated Bermuda, 9th June, 1812.

(*Nereidæ*.)

254. *Lycoris*^a *foliosa*, R. O.

Lycoris grisea, margaritacea, ligulis branchialibus longis, cirris superioribus latis, compressis, et subvesiculosus.

This remarkable specimen measures ten inches in length; the breadth of the body (exclusive of the feet) is from four to six lines, and gradually diminishes towards the posterior extremity, from which some segments have been lost.

The body is slightly depressed, convex above, and marked with a deep longitudinal furrow beneath; it consists of 140 segments, and is of a blueish gray colour. The proboscis consists of two segments, the anterior being the smallest, and is armed with two strong, curved, pointed, and 4-dentated jaws, acting horizontally, like the maxillæ of insects. The head is trilobate; the exterior lobes obtuse, with a small depression in front of each, into which the lateral antennæ appear to be retracted; the middle lobe bears on its front the two small mesial antennæ, and at its posterior part may be observed four minute black specks (eyes). The large anterior segment formed by the union of the first two, bears eight tentacula (*cirres tentaculaires*, Sav.) of which the superior or dorsal pair is the longest, and the rest diminish in length progressively as they are placed lower down.

The first and second pairs of feet are represented by the tentacula, the remainder are fitted for progression and consist of two parts. The ventral or inferior division (*rame*, Sav.) is provided with a small filiform cirrus,

^a For the characters of this genus see "Système des Annelides," par Jules-César Savigny, p. 29.

with an elongated obtuse and hollow process (*languette*; *ligula branchialis*, Sav.); and above these with a sheath from which projects a packet of shining hairs. The superior or dorsal division, closely connected at its root with the inferior, is provided with a small elongated and flattened process, above which is another much larger, and flat like a scale; but which consists of two laminæ, and is in fact a flattened vesicle. A bristle is introduced into the cavity of some of these hollow laminæ. At their superior margins, these laminæ have a slight notch, from which arises a small *cirrus*; a packet of shining hairs also projects from the notch that separates the two parts of the superior division.

Dr. Shaw has figured this individual in the Naturalist's Miscellany, ix. *pl.* 311; but, deceived by the magnifying power of the glass containing it, he has given it almost twice its natural breadth, and the head and lateral organs are very imperfectly delineated. (The structure of the proboscis, which was retracted when this figure was taken, has been since ascertained by dissection.) He identifies it with the *Nereis lamellifera* of Pallas (*Nereis lamelligera*, *Gmel.*^a) described in the *Nova Acta Petropol.* ii. p. 232. *tab.* v. But the description of Pallas is taken from two specimens, one from the Indian, the other from the Atlantic Ocean, which appear to be distinct species; for the first (*fig.* 12. 13.) has only three tentacular cirri on each side, while the latter (*fig.* 14. 15. 16. 17.) agrees with the present specimen both in the size and number of the tentacula: in the structure of the head and proboscis, however, and in the form and proportional size of the laminar processes, they evidently differ from the species under consideration, nor would they be admitted by Savigny into the same genus.

See *Gallery*, No. 59. 472. A species nearly allied to this, if not the same.

254 A. *Lycoris* ———.

Hab. ———

Length of body nine inches and a half: number of segments 128, the last

^a Another species is figured as *Nereis lamelligera Gmel.* in Sowerby's *Brit. Miscell.* i. *pl.* 61; but there the larger scale is evidently the superior one, which is the reverse of the specific character quoted: it differs from *Lycoris foliosa* in wanting a cirrus at the superior margin of the larger scale, and by the latter being supported on a much more slender peduncle. As no mention is made of the animal possessing jaws, nor any appearance of them in the figure, it may not even belong to the same genus.

twenty-five becoming suddenly smaller ^a: colour purple, with iridescent tints. The superior cirri are compressed, and of a triangular form, resembling those of the preceding specimen but of smaller size. Maxillæ armed with four teeth.

This differs from *Lycoris podophylla* (Syst. des Annel. p. 30. no. 2.), in having well-marked dentated jaws, as well as in colour and in the number of segments.

Mus. Brookes. Catal. p. 100. No. 56 v.

254 B. *Lycoris margaritacea*, Sav. *Nereis margaritacea*, Leach.

Fig. Encycl. Brit. Suppl. Art. Annulosa, tab. xxvi.

Hab. Northern Seas.

Donor, Captain Buchan, R.N.

254 C. *Myriana longissima*, Sav. *Syst. des Annel.* p. 41.

Hab. Mediterranean Sea.

Donor, B. C. Henderson, Esq. 1811.

254 D. *Nephthys* ———, Sav.

Hab. This specimen is from the coast of Sussex. It is about eight inches in length, with a proboscis of a deep purple hue; the first segment large, claviform, and terminating anteriorly in small pointed processes; the second very short, with a longitudinal orifice and double row of tentacula. *Nephth. Hombergii?* Sav. *Syst. des Annel.* p. 34.

Donor, Sir E. Home, Bart.

254 E. *Glycera unicornis*, Sav. *Syst. des Annel.* p. 37.

Head in the form of a pointed cone; body linear, cylindrical, enlarged towards the anterior part; segments numerous, of a yellow-bronze colour.

Fig. Müll. Zool. Dan. tab. lxii. fig. 6. 7? *Nereis alba*.

Hab. Northern Ocean. By H.M.S. Trent. Northern Expedition, 1818.

“Caught between the ship’s side and the edge of a large floe of ice to which we were moored on the evening of the sixteenth of June, 1818, about twelve miles north-west of Rein-Deer Island, in thirty-six fathoms water; Lat. 79° 56' N. Long. 10° 30' E. The thermometer in the air

^a If this circumstance were natural and constant, it would form good ground for a specific distinction; but it is more probably accidental, formed by regenerated segments after a partial loss of the caudal extremity of the body.

34°, in the water 30° Fahr. When first observed, it was about a foot below the surface of the water, and descending fast towards the ship's bottom. Its motion was quick and lively, and in a spiral or serpentine manner; it was brought up from the depth of four or five feet with a boat-hook. On being placed on a shovel, it cast up a considerable quantity of white slime which rendered the water turbid, and evinced evident signs of animation till immersed in the spirit."—*Note accompanying the specimen.*

Donor, Lieutenant Franklin, R.N.

254 F. Smaller specimens of *Glycera unicornis*.

Caught in the same situation as the preceding, on the twentieth of June, 1818. "The thermometer in the air 34°, water 31°. Several others were observed some feet down in the water at the same time."—*Note accompanying the specimens.*

Donor, Lieutenant Franklin, R.N.

(*Aphroditidæ*.)

255. *Halithæa aculeata*, Sav. *Syst. des Annel. p.* 19. *Aphrodita aculeata*, Linn. The Sea-mouse of fishermen.

Hab. European Seas. The largest and most brilliant of the family; the dorsal scales are covered by a felted downy membrane.

See Gallery, No. 59. 270. 321. 867. 872. 1009. 1303. 2127. &c.—dissections of this species.

256. *Polynoë squammata*, Sav.

Fig. Pallas, *Miscell. Zool. tab. vii. fig. 14.* *Aphrodita squammata.*

Hab. The bottle contains two small specimens of this species; in the upper one the proboscis is exerted.

See Gallery, No. 471. A finer specimen dissected.

257. *Polynoë impatiens*, Sav.? *Polynoë vesiculeuse.*

Fig. Ouvrage de l'Égypte, *Annelides, pl. 3. fig. 2.*

Hab. Gulf of Suez.

This specimen is about three inches long, with twelve pairs of semitransparent vesicular scales on the back.

Class CIRRIPEDA^a.

ORDO I. CAMPYLOSOMATA.

258. *Otione* Cuvieri, *Leach*. *Lepas aurita*, *Linn*.

Fig. Suppl. Encycl. Brit. *tab.* lvii. *Mém. du Mus.* ii. *pl.* v. *fig.* 12.

Hab. Northern Ocean.

259. *Otione* Cuvieri.

A small specimen laid open to show the tentacula and internal structure of the tube.

260. *Otione* Cuvieri.

Laid open to show the respiratory organs and muscles which move the tentacula.

261. *Otione* Cuvieri,

with a young *Cineras vittata* attached to the base of the peduncle.

See *Seba*, iii. *tab.* xvi. *fig.* 5, where the two genera are figured similarly attached.

262. *Cineras vittata*, *Leach*. *Lepas vittata*, *Linn*.

Fig. Suppl. Encycl. Brit. *Art.* Cirripedes, *tab.* lvii.

Hab. Atlantic Ocean. Mediterranean. Coast of Wales, *Montagu*.

263. *Cineras vittata*.

A group of three; one of which is laid open laterally.

264. Young specimens of *Cineras vittata*.

* This class was established by Lamarck, and comprehends the animals familiarly known as Barnacles and Acorn-shells. They are included amongst the Vermes Testacea of the *Systema Naturæ* under the generic term *Lepas*, and are the Mollusca Cirrhopoda of Cuvier (*Règne Anim.* ii.).

Lamarck and Latreille have pointed out their affinity to the Annulose animals; the latter author and another distinguished entomologist (Mr. W. S. MacLeay) have considered them related to the Entomostracous crustacea. This opinion has been recently supported by some remarkable facts connected with the history of their development, discovered by John V. Thompson, Esq. F.L.S. Surgeon to the Forces, and described in his *Zoological Researches*, No. III. *Memoir* IV.

The anatomy of the Cirripedes has been successfully investigated by Hunter (See in the Gallery of the Collection, No. 63. 64. 65. 582. 1011. 1012. 1013. 1014. 2298. 2299. 2300. 2301. 2302. 2303. 2810.),—by Poli (*Testacea utriusque Siciliæ*),—and by Cuvier (*Hist. des Mollusques*).

265. *Cineras Hunteri*.

In this specimen, two small groups are attached to the tail of *Hydrophis bicolor*, which is figured in Russell's *Indian Serpents*, i. *tab.* xli. and is called by the natives "Nalla Wahlagillee Pam." Russell says, "This sea-snake, according to the Vizagapatam fishermen, seldom approaches the shore: several of them had never seen one before. They pretended it was of a very dangerous kind, which is contradicted by the want of poisonous organs."

Dr. Shaw alludes to this specimen in his *Zoological Lectures*, ii. p. 187, where, treating of the genus *Lepas*, he observes, "These animals sometimes attach themselves to animated as well as to inanimate bodies, and are frequently seen on turtles and other marine animals. In the Museum of the late Mr. Hunter is an instance of a species of sea-snake, (the *Anguis platyura* of Linnæus, and *Hydrus bicolor* of more modern naturalists,) which has a group of small *Lepades* affixed to one side of its tail."

And Dr. Leach, in the article *Cirripedes*, *Suppl. to Encycl. Brit.*, says, "We have seen two other species of *Cineras*, one adhering to a *Hydrus* in the Collection of John Hunter, the other in the Collection of Animals formed in the Expedition to Congo by Mr. J. Cranch."

266. *Cineras Hunteri*.

A small group attached by very short peduncles to the cuticle of a snake; probably from the *Hydrophis* of the preceding specimen.

267. *Pentalasmis anatifera*. *Pentalasmis crocea*, *Leach*. *Lepas anatifera*, *Linn*. The Barnacle.

Fig. Seba, *Mus.* iii. *tab.* xvi. *fig.* 1. *Wood's Conchology*, *pl.* 2.

Hab. The seas of Europe, Asia, Africa, and America.

267 A. *Pentalasmis anatifera*.

This specimen "is remarkably perfect, the whole cavity being distended with its own ropy mucus. In all the other specimens in the Museum, this mucus has escaped in consequence of the separation of the membrane which surrounds the tentacula, and the animal loses much of its form in consequence of it."—*Note by Mr. Clift in the Book of Donations.*

Donor, Sir Everard Home, Bart.

268. *Pentalasmis anatifera*.

Laid open on the ventral aspect, exposing the tentacula, branchiæ, and ova.

269. *Pentalasmis anatifera*.

One of the lateral valves turned back, and the tubular stem laid open, to show the structure and relative position of the soft parts.

269 A. *Pentalasmis anatifera*.

A large and elegant group, adhering to a portion of wood. The peduncles of some of these individuals are fourteen inches in length.

Donor, Sir Humphry Davy, Bart. P.R.S.

269 B. *Pentalasmis anatifera*.

A fine cluster, springing from a large individual.

Donor, Mrs. Robinson.

269 c. *Pentalasmis anatifera*.

A similar group, similarly attached. See Home, Comp. Anat. iv. *pl.* 151.

Donor, Mrs. Robinson.

270. *Pentalasmis anatifera*?

The specimens appear to be very young, and are attached to the fucus called Common Sea-Bottle.

270 A. *Pentalasmis* ———.

A cluster of specimens, adhering round the stem of a fucus, taken off Cape Horn, and presented by Mr. S. Stutchbury.

270 B. *Pentalasmis* ———.

A series of specimens, from the period of their first attachment to foreign bodies to that of the formation of a distinct peduncle and valves; selected from the preceding cluster.

Donor, Mr. S. Stutchbury.

271. *Pentalasmis striata*, *Leach*. *Anatifa striata*, *Brug*. Striated Barnacle.

Fig. Encycl. Méth. *pl.* 166. *fig.* 2.

Hab. sp. Atlantic Ocean, Coasts of America.

A group attached to a portion of fucus.

272. *Pentalasmis striata*.

A group in different stages of growth, attached to a fucus.

273. *Pentalasmis striata*.

Many specimens on the stem of a fucus. Some of these are almost buried in the fructification, to which specimens of *Pentalasmis vitrea* are also attached.

274. *Pentalasmis vitrea*, *Leach*. *Anatifa vitrea*, *Lam*. *Lepas fascicularis*, *Ellis*. Bladder Barnacle of some authors.

Fig. Ellis's Zoophytes, *pl.* 15. *fig.* 6. Wood's Conchology, *pl.* 10. *fig.* 4.

Hab. Pacific and Australian Oceans.

A fine group of this species attached to a central round smooth-skinned ball.

275. *Pentalasmis vitrea*.

A group similar to the preceding. A section has been made on one side of the central ball, showing its structure to be cellular; it is probably of vegetable origin, and is frequently met with in the Australian Seas, having this species of *Pentalasmis* attached to it.

276. *Pentalasmis vitrea*.

The lateral valves of one side are removed, so as to exhibit the form and relative position of the tentacula, branchiæ, stomach, &c.

276 A. *Pollicipes Cornucopia*, *Leach*. *Lam*. *Lepas Pollicipes*, *Gmel*.

Var. *valvis scabris*.

Hab. Low islands in the Pacific Ocean.

Donor, G. Tradescant Lay, Esq.

277. *Pollicipes villosus*, *Leach*, *Suppl. to Encycl. Brit.* art. *Cirripedes*, *p.* 170. *tab.* lvii.

In the specimen the brown coriaceous covering of the peduncle is continued on one side over the valves, but is removed from the opposite aspect to show their form. The dorsal valve in this very rare species recedes at its extremity from the lateral valves; the superior of these last are curved backwards so as to meet and join the extremity of the dorsal valve, like the mandibles of a bird.

The stem is beset with small white spines, like bristles, more or less apparent through the external membrane.

278. *Pollicipes villosus*.

A group of three on a portion of a Bivalve shell.

ORDO II. ACAMPTOSOMATA.

279. *Tubicinella Balænarum*, *Lam.* *Tubicinella Lamarckii*, *Leach*.

Lepas trachealis, *Linn.*

Fig. Ann. du Muséum, i. *pl.* 30. *fig.* 1. *Wood's Conch. pl.* 4.

Hab. Fixed to the skin of Whales, sometimes penetrating deeply.

The four which form the present specimen are imbedded to the extent of two inches or more: the tube of one is longitudinally bisected, to display the tentacula and internal peduncle.

280. *Coronula Diadema*, *Lam.* *Lepas Diadema*, *Gmel.*

Fig. Encycl. Méth. *pl.* 165. *fig.* 13. 14. *Blainville, Malacol. pl.* 86. *fig.* 4.

Hab. The skin of Whales.

Numerous specimens imbedded in the skin of a Whale.

281. *Coronula Diadema*.

A very large specimen, to which a group of *Otion Cuvieri* is attached.

282. *Coronula Diadema*.

A similar specimen, showing the *Otion* in different stages of growth; part of the skin of a Whale adheres to the *Coronula*.

282 A. *Coronula Diadema*?

A remarkably fine specimen, attached to the skin of a Whale.

Donor, Mr. Bullock.

282 B. *Balanus glacialis*. (Acorn-shell.)

This species is singularly attached to the spine of a Dog-fish (*Squalus Acanthias*).

Donor, Mr. Clift, 1809.

282 c. *Balanus glacialis*.

Numerous small ones infesting different parts of *Arcturus tuberculatus*.

Donor, Alexander Fisher, Esq. Surg. R.N.

- 282 D. *Balanus Tintinnabulum*, *Lam.* *Lepas Tintinnabulum*, *Linn.*
The Bell Barnacle.

Hab. The Seas of Europe, America, and India. Found in a fossil state in Italy.

One of the valves has been removed to show the animal and its operculum; the *cirri* appear to have been nibbled down by some Crustacea. *Balanus* *Amphitrite* adheres to the base of the specimen.

Donor, Mr. S. Stutchbury.

- 282 E. *Acasta* ———, *Leach.*

Small specimens of this genus imbedded in *Spongia strobilina*? *Lamarck.*

Hab. Shores of Abyssinia.

Donor, Henry Salt, Esq.

Class CRUSTACEA.

Subclass ENTOMOSTRACA.

ORDO PHYLLOPODA.

(*Ceratophthalmata.*)

283. *Artemia salina*, *Leach, Suppl. to Encycl. Brit.* *Cancer salinus*,
Linn. Lymington Shrimp or Brine Worm.

Fig. Rackett, in *Linn. Trans.* xi. tab. xiv. fig. 8—10.

Hab. The salterns or brine tanks; and in a concentrated solution that destroys most other marine animals.

- 283 A. Small Phyllopodous Crustacea.

“From a bag under the tongue of the Little Auk (*Alca Alle*).”

Donor, Alexander Fisher, Esq. Surg. R.N.

- 283 B. *Branchipus stagnalis*, *Leach, Suppl. to Encycl. Brit.* *Cancer stagnalis*, *Linn.*

Fig. Latreille, *Hist. Nat. des Crustacés et des Insectes*, iv. pl. 36. 37.

Hab. “Is generally found in such waters as are of a soft nature, and particularly in those shallows of rain-water which are so frequently seen in the spring or autumn, and in which the *Monoculus Pulex* of Linnæus, and other small animals abound.” *Shaw, Linn. Trans.* i. p. 103.

Donor, William Clift, Esq. 1819.

ORDO XYPHOSURA.

- 283 c. *Limulus Polyphemus*, *Fabr.* *Monoculus Polyphemus*, *Linn.*
Fig. Leach, Zool. Miscell. *pl.* 84. *Limulus Sowerbii.*
Hab. Coasts of America, from New York to the Gulf of Mexico.
Mus. Leverian.

ORDO SIPHONOSTOMA.

(Caligidae.)

284. *Lernæa pectoralis*, *Gmel.*
Fig. Müller, Zool. Dan. *tab.* xxxiii. *fig.* 7.
Hab. The pectoral fins of the Haddock, Turbot, &c.

(Epizoadae.)

285. *Dichelesthium Sturionis*, *Hermann.*
Fig. Hermann, Mém. Aptérol. *tab.* v. *fig.* 7. 8.
Hab. The branchiæ of the Sturgeon.
- 285 A. *Lernæopenna Exocæti*, *Blainville, Dict. des Sciences Nat.* xxvi.
p. 120. *Lernæa* of the Flying Fish.
Fig. Holten, Acta Danica, Holm. 1802.
Hab. These specimens were taken from the back of the Flying Fish (*Exocætus volitans*).
Donor, Mr. Clift.
286. *Lernæopenna* ———.
 Another species, with the head and neck far inserted under the integument of part of the fin of some fish, probably a Diodon.
- 286 A. *Lernæa elongata*, *Grant, Brewster's Journal*, vii. *p.* 147.
Fig. Brewster's Journal, vii. *pl.* ii. *fig.* 5. Scoresby, Account of Arctic Regions, i. *pl.* 15.
Hab. Adheres to the cornea of the Greenland Shark.
Donor, Lieut. Colquhoun, R. Art^y. 1823.
287. *Lernæa* ———.
 Two specimens, about ten lines in length, attached by long tentacula to the

margin of the anus of a small *Squalus*. In addition to the elongated ovarian appendages, there are also two smaller ones attached to the posterior extremity of this species.

287 A. *Lernæa Spratti*. *Lernæa* of the Sprat.

Fig. Sowerby's Brit. Miscell. 1806.

Hab. Generally attached to the eye of the Sprat (*Clupea Sprattus*), as in the present instance.

Donor, Mr. S. Stutchbury.

287 B. *Lernæa Spratti*.

This specimen is deeply inserted in the skin of the back^a.

Mus. Dr. Jenner.

Subclass MALACOSTRACA.

ORDO DECAPODA. BRACHYURA.

(*Pinnipeda*. Swimmers.)

288. *Matuta Victor*, *Fabr.* Var. *a. punctis sparsis*.

Fig. Rumph. Mus. tab. vii. fig. 8. Desmarest, Sur les Crustacés, pl. 7. fig. 2.

Hab. Indian Ocean.

289. *Lupa Dufourii*, *Desm. Sur les Crustacés*, p. 99. *Portunus Dufourii*, *Latr. (fœmina)*.

Hab. Mediterranean Sea.

(*Orbiculata*.)

289 A. *Ixa canaliculata*, *Leach, Zool. Miscell.* iii. p. 26. *Leucosia Cylindrus*, *Fabr. Latr.*

Fig. Leach, Zool. Miscell. iii. pl. 129. fig. 1.

Hab. Indian Seas.

Donor, Dr. Leach, F.R.S. F.L.S. &c.

^a The fishermen assert, that the sprats to which these *Lernææ* are affixed generally lead the shoal; and on account of the phosphoric light emitted by their parasitic adherents, they call them "Lanthorn Sprats."

(Arcuata.)

290. *Cancer Pagurus*, Linn. Fabr. Leach. Common Crab of the markets.

Hab. During the summer months it frequents all our rocky coasts, generally preferring deep water: is more rarely met with in winter, when it is said to burrow in the sand.

Fig. Leach, Malacostr. Brit. tab. x.

- 291 J. B. *Cancer cinereus*, Bosc.?

Hab. Coasts of the Mediterranean Sea.

A female with ova.

- 291 A. *Xantho Kumini*.

Rather smaller than the *Xantho florida* of Dr. Leach; but on comparing it with the figure in the Malacostraca Podophthalmata, tab. xi. it differs from that species in having the frontal margin in the form of a sigmoid curve on each side of the central fissure, and in having only two protuberances on the lateral regions; the carpal tubercles are also more produced, and the *pollex* or moveable claw is less curved and shorter in proportion to the *manus*. The upper part of the *manus* is marked with longitudinal and punctuated furrows; but the arcuated front and larger size of this species, with the difference of *habitat*, seem all to indicate that it is distinct from the *Cancer* (*Xantho*) *Poressa* of Olivi, Zool. Adriat. pl. ii. fig. 3.†

Hab. Oahu, Sandwich Islands.

Donor, G. Tradescant Lay, Esq., who gives *Kumini* as the native name.

(Quadrilatera.)

- 291 B. *Macrophthalmus telescopicus*, R. O.

M. oculorum pedunculis extra angulis testæ valde porrectis, lateribus testæ utrinque bispinosis, femoribus supra unispinosis, manibus compressis latis.

For the characters of the genus *Macrophthalmus*, see Latreille in Cuv. Règne Animal, tab. iv. p. 44. nouv. ed. The species under consideration is remarkable for the form of the ophthalmic peduncles, which are slender, endowed with free motion, and so produced as to extend beyond the angles of the shell by half their length.

The glass contains two specimens, a male and a female, of small size, of a dirty blue colour, and slightly tomentose. The *rostrum* is narrow, depressed, and grooved down the middle. The distance between the eyes, which terminate the peduncles, is two inches; the breadth of the *carapace* is one inch two lines. The grooves which lodge the peduncles are wide, and have finely crenate edges. The *manus* is slightly carinate near its outer margin. The margins of the legs are more or less ciliated.

Hab. Oahu, Sandwich Islands.

Donor, G. Tradescant Lay, Esq.

292. *Gelasimus Pugilator*, Latr. *Ocypode Pugilator*, Bosc.

Hab. Coasts of South Carolina.

Of this genus are the Crabs, termed Callers (*Crabes appellans*), or Fighters, from their large forceps-claw being generally bent in front of the head in a beckoning or pugilistic attitude.

292 A. *Gelasimus Duperreyi*?

A small species. *Carapace* six lines in length and eight in width, smooth, slightly marked with lines in form of $\times$ on the back; margins of the ophthalmic grooves crenate. *Right chela* disproportionately large, the arm furnished with a single tooth, and crenate at the inferior and inner margins; hand moderately compressed, with two transverse rows of small tubercles beneath, near the base of the thumb. *Left chela* very small, and furnished at its extremity with short dark hairs. Body liver-coloured; forceps orange-yellow.

Fig. Duperrey, Voyage autour du Monde, Atlas, Crustacés, pl. i. fig. 2.

Gelasimus Duperreyi.

It has been remarked that the unequal size of the forceps-claws is peculiar to the male: in the present instance both specimens are males.

Hab. Oahu, Sandwich Islands.

Donor, G. Tradescant Lay, Esq.

292 B. *Ocypode Urvillii*, Guérin in Duperrey's Voyage, MS.

The *carapace* of this species is ten lines in length and an inch in breadth, convex, delicately shagreened, and with a canaliculate margin. The *rostrum* is narrow, inclined, and rounded anteriorly; on each side of it are two incisures, the mesial lodging the peduncles, and the lateral the eyes

themselves, which are very large, and extend almost to the extremities of the peduncles. The fingers of both *chela* are dentated internally and marked with longitudinal lines; the *manus* of the left *chela*, which is the largest, is serrated at its outer margin. The legs are compressed and transversely striated.

Fig. Duperrey, Voyage autour du Monde, Atlas, Crustacés, *pl. i. fig. 1.*
(the right *chela* is largest in the figure).

Hab. Low islands of the Pacific Ocean.

Donor, G. Tradescant Lay, Esq.

293. *Pinnotheres Veterum*, *Leach.* *Cancer Pinnotheres*, *Linn.*

Hab. Bivalve shells.

This species has been observed in *Pinna*, and also in *Ostrea edulis*, and is probably that which is alluded to by the ancients as purveying for the Mollusca, in whose shell it may have taken up its abode. Vide *Cic. de Nat. Deor. lib. 2. sec. xlviii.* *Plin. Hist. Nat. lib. ix. cap. 42.*

294 J. B. *Pinnotheres Pisum*, *Latr.* *Cancer Pisum*, *Linn.*

Hab. In the shells of *Modioli*, but most commonly those of *Mytili*; their presence in the latter has been erroneously supposed to occasion those unpleasant symptoms that sometimes come on after eating muscles.

294 A. *Plagusia tuberculata*, *Latr.*

Fig. *Encycl. Méth. pl. 305. fig. 1.*

Hab. Oahu, Sandwich Islands; where it is called by the natives *Prica*.

Donor, G. Tradescant Lay, Esq.

294 B. *Grapsus Thukuhar*, *R. O.*

Carapace quadrilateral, broadest in front; the sides slightly converging to the posterior angles, which are truncated. *Rostrum* very broad, inclined, supporting four prominences, of which the lateral are the largest. No teeth at the sides of the shell, but the anterior angles produced and acute; oblique lines over the branchial regions. *Chela* equal, short, obtuse; *humeri* with two spines; internal margin of the *cubiti* dilated towards the apex, and armed with spines; *carpi* with one or two spines internally; *manus* slightly tuberculated at the upper part, the remainder smooth and mottled with purple. Claws compressed, the *femora* with

two or three spines at their apices, the other joints hairy, the terminal ones armed with short brown spines, sprinkled over with minute brown spots, like the skin of *Sepia officinalis*. Colour, a yellowish dun.

Hab. Oahu, Sandwich Islands. Native name *Thukuhar*.

Donor, G. Tradescant Lay, Esq.

294c. *Grapsus quadratus*.

Breadth and length eight lines; *carapace* convex above, arched at the sides, narrowed and truncated behind; *rostrum* broad, depressed, bearing four slightly elevated tubercles.

Fig. Sloane, *Hist. of Jamaica*, ii. pl. 245. fig. 1. *Cancer marinus minimus quadratus*.

Donor, Sir Everard Home, Bart.

(*Trigona*.)

295. *Macropodia Phalangium*, Leach.

Fig. Leach, *Malacostr. Podophth.* Brit. pl. 23. fig. 6. Pennant, Brit. Zool. iv. tab. ix. fig. 3. *Cancer Phalangium*.

Hab. Coasts of Europe, Mediterranean Sea.

It is said to invest itself occasionally in leaves of fuci to insnare its prey.

(*Cryptopoda*.)

295A. *Calappa tuberculata*, Fabr.

Fig. Herbst, *Krabben*; tab. xiii. fig. 78.

Hab. Oahu, Sandwich Islands. Native name *Papaki*.

Donor, G. Tradescant Lay, Esq.

DECAPODA. MACROURA.

(*Hippidæ*.)

296. *Remipes* ———.

Hab. ———

Mesial antennæ multiarticulate, and longer than the lateral: the first pair of feet are adactyle, with the second joint subquadrate, large; the second pair elongated, with the last joint narrow, compressed, and pointed; the third and fourth pairs terminate in crescent-shaped laminae; the fifth

pair is small, and pointed; all are more or less hirsute: the caudal appendages are terminated by two ciliated natatory laminae. The *cara-pace* is oval and smooth, with the lateral borders crenate as in *Remipes testudinarius*, but with one tooth only, in the middle of the anterior border, and a slight indentation on each side.

A female, with ova under the broad segments of the tail.

296 A. *Remipes* ———.

Hab. Coasts of Demerara.

A female with ova, the same species as the preceding, but of a brown colour, with the extremities of the tail and feet approaching to black.

Donor, Sir Everard Home, Bart.

297. *Remipes testudinarius*, *Latr.*

Fig. Cuvier, Règne Animal, iv. pl. xii. fig. 2. *Remipède tortue des côtes de la Nouvelle Hollande.*

Hab. New Holland.

(*Paguridæ*. Hermit or Soldier Crabs.)

298. *Pagurus Bernhardus*, *Fabr.* Cancer Bernhardus, *Linn.* The Hermit Crab.

A small specimen in a Trochus.

299. *Pagurus Streblonyx*, *Leach*, *Malacostr. Podophth. Brit.* Cancer Bernhardus, *Linn.* The Soldier Crab.

Fig. Leach, *Malacostr. Podophth. Brit. tab. xxvi. fig. 1—4.*

Hab. European coasts, in deserted turbinated univalves. The specimen is in a Buccinum. "The twisted claws distinguish this from all the other species that I have seen^a." Leach, *ut supra*.

300. *Pagurus Streblonyx*.

The specimen is in a Buccinum undatum, part of which is removed to expose the body and tail of the Pagurus; this is furnished with appendages by means of which, and its diminutive hinder claws, the parasitic occupant is enabled to adhere to the pillar of the shell.

For the Buccinum, see Pennant, *Brit. Zool.* iv. p. 272. pl. 77.

^a Compare with No. 302 B.

301. *Pagurus Streblonyx*.

It has been removed from the large *Buccinum undatum*, which is suspended. On comparing this with the preceding specimens, it will be seen that the Hermit Crabs, as their growth proceeds, occupy shells of successively larger dimensions; and this change of habitation is said to take place annually, at the period of casting the integument.

302. *Pagurus Streblonyx*.

Two specimens, removed from their habitations.

302 A. *Pagurus* ———; allied to *Streblonyx*.

In the upper specimen, the left forceps-claw presents a distinctive character, being of a trihedral form, with a ridge along the superior and external border;—these characters are less strongly marked in the lower specimen. In both, the claws have a slight twist, but less marked than in *Pagurus Streblonyx*. They are of a dirty brown colour, and are beset with minute *Spirorbes*.

Hab. Kamschatka.

Donor, G. Tradescant Lay, Esq.

302 B. *Pagurus splendescens*, R. O.

P. subfuscus, viridi-aurea nitens, chelis tuberculis in longum dispositis, sinistræ digitis valde elongatis.

This singular species has a convex and heart-shaped *thorax*, tridentate in front, the middle tooth produced; of a deep fuscous colour and granulate, very much resembling the back of a toad. The *ophthalmic peduncles* are short and thick. The *chela* are elongated, compressed, and of unequal size; the right being the largest: below, they are hirsute and granulate; above, they reflect hues of green and pink with a metallic lustre, and are marked with longitudinal rows of small tubercles; the fingers of each *chela* gradually terminate in points, those of the left being remarkably elongated, bent at their extremities, and closing without intervening space. The second and third pairs of claws are longer than the *chela*, compressed, granulate, with serrated margins, and, together with the peduncles of the antennæ, reflect the same hues as the preceding pair; their ultimate joints have a twist as in *Pag. Streblonyx*. The fourth and fifth pairs of claws are very short: the abdomen is short, membranous, and without any lateral laminae or ciliated appendages; at least there was

no appearance of any in the three specimens from which the preceding characters were taken; but this circumstance may be peculiar to the males.

Hab. Kamschatka.

Donor, G. Tradescant Lay, Esq.

303. *Pagurus Miles*, *Oliv. Encycl. Méth. Ins. viii. sp. 13. p. 643.*

Hab. Sumatra.

In this specimen a number of dark specks may be observed regularly arranged on the concave side of the abdomen, close to the tail; these Mr. Broderip has discovered to be minute acetabula, analogous to the sucking-cups on the arms of the cuttle-fish, and serving to attach the animal more firmly to the *columella* of its habitation. *Vide Zoological Journal, No. xiv. p. 208.*

- 304 J. B. *Pagurus Diogenes*, *Fabr.*

Hab. Indian Seas.

305. *Pagurus granulatus*, *Oliv. Encycl. Méth. Ins. viii. sp. 5. p. 640.*

Hab. Indian Ocean.

This specimen agrees with the description given by Olivier in every respect, except, that the right *chela* is manifestly smaller than the left, and that the four succeeding claws are longer than the *chelæ*.

- 305 A. *Pagurus Aniculus*, *Fabr. Oliv. Quoy & Gaimard.*

Fig. Freycinet, Voyage autour du Monde, Atlas, *pl. 79. fig. 1.* Zoologie, p. 531. *Pagure Vieillard.*

Hab. Carysfort Island. "This species breathes water only, and dies very soon after being removed from that element."—*Note accompanying the specimen by the*

Donor, G. Tradescant Lay, Esq.

- 305 B. *Pagurus guttatus*, *Oliv. Encycl. Méth. Ins. viii. sp. 3. p. 640.*

Fig. Encycl. Méth. *pl. 311. fig. 2.* Freycinet, Voyage autour du Monde, Atlas, *pl. 79. fig. 3.*

Hab. Carysfort Island.

Donor, G. Tradescant Lay, Esq.

- 305 c. *Pagurus pictus*, *R. O.*

P. parasiticus, chelis inæqualibus, sinistra majore, digitis granu-

latis; pedibus albis rubro armillatis, tertiis infra penicillato-hirsutis.

Length of body one inch and a half. *Thorax* smooth, white, slightly tridentate in front. *Ophthalmic peduncles* long, crimson at the base, black at the apex; *chelæ* obtuse, of a deep yellow colour, almost smooth, except the fingers, which are studded with small white tubercles. *Antennæ* of a yellow colour, not exceeding the length of the *chelæ*. Second and third pairs of claws marked with alternate transverse belts of white and carmine, the latter being sprinkled with minute white spots, the last joint white with red spots; small stiff red hairs scattered here and there over the claws, the third pair having besides several packets of moderately long pink hairs growing from the under part of the last and penultimate joints, resembling a brush. The *post-abdomen* has four thin horny plates at its upper part, and as many short and delicate ciliated appendages attached to the left side.

Donor, G. Tradescant Lay, Esq.

305 D. *Pagurus oculatus*, *Risso*.

Hab. Mediterranean Sea. This example is from the coast of Sicily; the *chelæ* are subequal, and the ophthalmic peduncles very long.

Donor, Lord Valentia, 1811.

306. A small *Pagurus* with subæqual *chelæ*.

Hab. ———

306 A. *Cœnobita*^a *clypeata*, *Latr.* *Pagurus clypeatus*, *Olivier*.

Fig. *Encycl. Méth. pl.* 311. *fig.* 1.

Hab. Oahu, Sandwich Islands, and the low islands of the Pacific generally.

Donor, G. Tradescant Lay, Esq.^b

^a The genus *Cœnobite* was established by Latreille at the expense of the preceding; and is characterized by elongated antennæ, the mesial almost equalling the lateral in length; and by the form of the thorax, which is conical, narrow, elongated, truncated anteriorly, and so compressed laterally, that the sides form right angles with the dorsum. This species is the type of the Genus.

^b This species, Mr. Lay tells us, abounds in the low islands of the Pacific, where it is a great article of food. The natives roast them, after pulling off their claws, which are scattered about. These fragments soon attract others of the species, which come to feed on the remains of their unfortunate companions; so that after the meal has commenced, an ample supply is thus kept up.

Mr. Stutchbury says that they commonly select *Turbo setosa* Lam. for their habitation; and that he

307. *Cænobita Hunteri*, R. O.

This species is about two inches and a half in length.

Chelæ unequal; the *manus* of each has a tuft of yellow shining hairs on its superior margin; that of the left is remarkably gibbous externally, and smooth, with the exception of a few minute scattered puncta; in the latter respect, and in colour, it differs from the preceding specimen, and appears to have been hitherto undescribed; it is proposed as a new species, with the following character:—

Cænobita albida, pedibus punctatis, chelâ sinistrâ majore, obtusâ, manu sublevi, extrorsum forte gibbosa.

To this species is affixed the name of the Immortal Founder of the Collection in which it has long remained unnoticed. There is unfortunately no record of its *habitat*.

307 A. *Cænobita Layi*, R. O.

*C. chelâ sinistrâ majore, manu interne carinato, supra tuberculis in linea dispositis, unguibus pedum secundi tertiiq[ue] paris tri-
edris.*

Length of body one inch two-thirds.

This is a small and elegant species; the *thorax* is granulate and of a light brown colour; the legs and antennæ of a blueish-gray colour; the outer surface of the *manus* is marked with a deep brown spot^a. It differs from the preceding species in having a line of small tubercles on the upper part, and a distinctly elevated ridge on the inner part of the left manus, which is also more compressed laterally, and more pointed; and the last joints of the second and third pairs of claws, which in *Cænobita Hunteri* are rounded, in this species present three angles.

It is named in honour of the Donor, George Tradescant Lay, Esq., by whom the Museum has been enriched with this and many other rare and beautiful specimens; collected by him in the Pacific Ocean during the Expedition of Captain Beechey, in H. M. S. Blossom, in the years 1826, 1827.

Hab. Carysfort Island.

has met with them dragging about this very heavy shell four hundred feet above the level of the sea, in the island of Tahiti.

^a The part probably which serves as the operculum of its borrowed habitation.

The lower specimen in the glass is partially withdrawn from the Helix, its habitation, to expose the ova.

307 B. *Cœnobita* Layi^a.

Two small specimens; one of them is in a Helix.

Hab. Carysfort Island.

Donor, G. Tradescant Lay, Esq.

(*Galatheadæ*.)

308. *Galathea squamifera*?

An imperfect small specimen.

Vide Leach, Malacrostr. Podophth. Brit. tab. xxviii.

309. Exuviæ of a Macrourous Decapod; probably a *Galathea*.

309 A. *Porcellana coccinea*, R. O.

P. coccinea, *chelis æqualibus*, *ulnis interne unidentatis*, *carpis quadri-dentatis*, *manibus supra carinatis*.

Length of body one inch and a half.

Rostrum advanced, pointed, grooved down the centre, with two small lateral teeth: *carapace* rugose, laterally and inferiorly canaliculate: *chelæ* equal, large, compressed, slightly scabrous superiorly, smooth beneath; *cubiti* with a single spine internally, *carpi* with four; form of the *manus* when closed lanceolate, above carinate, the external margin slightly and irregularly serrate; fingers unarmed, and closing without intervening space: *femora* compressed; superior margins serrate and ciliate. The crimson tinge is scattered over the body in spots and striæ; it is strongest at the extremities of the legs.

Hab. Low Islands of the Pacific Ocean.

Donor, G. Tradescant Lay, Esq.

^a In addition to the distinctive characters given by Latreille (*Familles Nat. du Règne Anim.* p. 276. *Règne Anim. Cuv. t. iv. p. 77. nouv. ed.*), the following circumstances are common to all the preceding specimens of *Cœnobita*. The truncated anterior margin of the thorax is canaliculate, and its angles are produced forwards; the ophthalmic peduncles are compressed laterally, and converge. The first joint of the mesial antennæ is conical, and has a spine at the upper part near the base; the manus of each chela has a small tuft of shining brown hairs on its superior margin, and that of the left is produced inferiorly; the four anterior claws are subhirsute, longer than the chelæ, and the third pair is longer than the second; add to which, that the general form of the animal bears the aspect of having been influenced by lateral pressure,—probably in relation to the form of the peculiar genus of shell selected for its abode.

(Scyllaridæ.)

310. *Scyllarus latus*, *Latr.* *Orchetta*, *Rondel.*

Fig. *Encycl. Méth. pl.* 313.

Hab. The shores of the Mediterranean, where its flesh is much esteemed. The lateral antennæ, or rather their peduncles, are singularly modified into four broad and flat articulations, notched and hirsute at their margins.

The specimen is a male, nearly a foot long.

(Palinuridæ. Cray-fish.)

311. *Palinurus ornatus*, *Fabr.*

Fig. *Encycl. Méth. pl.* 316.

Hab. Indian Ocean.

(Astacidæ. Lobsters.)

312. *Thalassena scorpionoides*, *Leach.*

Fig. *Leach, Zool. Miscell. iii. pl.* 130. *Herbst, Drif. Band. pl.* 62. *Cancer Astacus anomalus.*

Hab. Indian Ocean. A very fine example of this rare species.

313. *Astacus marinus*, *Fabr.* *Cancer Gammarus*, *Linn.* Common Lobster.

Fig. *Pennant, Brit. Zool. iv. pl.* 10. *fig.* 21.

Hab. European seas; especially along the coasts of Norway.

314. *Astacus fluviatilis*, *Fabr.* *Cancer Astacus*, *Linn.* The Craw-fish.

Fig. *Pennant, Brit. Zool. iv. pl.* 15. *fig.* 27.

Hab. European rivers, in holes which they form in the clayey banks.

(Caridæ. Shrimps and Prawns.)

- 314 A. *Crangon vulgaris*, *Fabr.* *Cancer Crangon*, *Linn.* The Shrimp.

Fig. *Pennant, Brit. Zool. iv. pl.* 15. *fig.* 30.

Hab. The specimens are from the Arctic Ocean.

The species is found in vast quantities along the sandy shores of Britain.

Donor, Alexander Fisher, Esq. Surg. R.N.

315. Small specimens of Crangon, that lived in salt-pans.

315 A. Crangon Boreas, *Fabr.*

Fig. Phipps, Voyage towards the North Pole, *pl.* 12. *fig.* 1. *Cancer Boreas.*

Hab. "Winter-harbour, Melville Island."

Donor, Alexander Fisher, Esq. Surg. R.N.

315 B. Crangon Boreas.

Hab. Winter-harbour, Melville Island. A *Spirorbe Serpula* is attached to the extremity of the rostrum, and small *Balani* are imbedded in the thorax.

Donor, Captain Edward Sabine, F.R.S.

315 C. Crangon salebrosus, *R. O.*

C. salebrosus, thorace septem-carinato, segmentis binis spinis utrinque terminatis.

Length of body four inches. Colour a deep brown.

General habit of the body granulate and scabrous. *Thorax* seven-carinate, the lateral carinæ serrate, the inferior ones indicated by tubercles longitudinally disposed, the middle one with two or three serrate and not very produced or acute spines; *rostrum* short, depressed, grooved on each side; four spines beneath the thorax, as in *Crangon Boreas*; the second pair of legs are elongated and didactyle, as in the type of the genus, and the abdominal segments terminate inferiorly in two spines; by which circumstances it may be readily distinguished from *Crangon septem-carinatus*, *Sabine, Suppl. App. to Parry's Voyage, p. ccxxxvi. pl. ii. f. 11. 12. 13,* and from *Pontophilus spinosus, Leach, Malacostr. Podophth. Brit. t. xxxvii A.*

Hab. Shores of Kamschatka.

Donor, George Tradescant Lay, Esq.

315 D. Hippolita armata, *R. O.*

H. thoracis carinâ dentibus quatuor, margine antico trispinoso, segmentis spinis acutis binis aut ternis utrinque terminatis.

Length of body three inches. Colour brown.

This species bears a near resemblance to the *Alpheus aculeatus* of Sabine, *Suppl. App. to Parry's Voyage, p. ccxxxvi. pl. ii. fig. 9.*; like it, it has

the apex of the pediform palpi and the middle lamella of the tail spinulose, and differs only in having the second, third, and fourth abdominal segments terminating inferiorly in three spines; in the former the middle spine is most produced, in these the posterior. In the present specimens the femora of the third, fourth, and fifth pairs of claws are spinulose externally, the terminal spine being the longest; but these were less obvious in another specimen.

As it seems now agreed to restrict the genus *Alpheus* to those species whose second pair of claws are shorter than the first, this species is referred to the genus *Hippolite* of Leach, characterized by the second exceeding the length of the first pair of claws, and in which, for the same reason, the *Alpheus aculeatus* of Captain Sabine should be included.

Hab. Shores of Kamschatka.

Donor, George Tradescant Lay, Esq.

315 E. *Hippolita armata*.

In this singular specimen the internal seta of the left internal antenna is produced to more than half the length of the external antenna, which it exceeds in thickness, and, as part has been broken off, might even have surpassed it in length; the corresponding seta of the opposite side has been unfortunately lost, but from the thickness of the part that remains, it was probably as long as the other. Does this circumstance indicate a new genus, or is it accidental? From the close affinity which this individual manifests in every other particular with the preceding, the latter may be considered the more probable opinion.

Donor, George Tradescant Lay, Esq.

316. *Penæus Orbignyianus*, *Latr. Nouv. Dict. d'Hist. Nat.* xxv. p. 155.

Caramote of Orbigny.

Hab. Coast of La Vendée.

317. *Stenope hispidus*, *Latr.* *Palæmon hispidus*, *Oliv.*

Fig. *Encycl. Méth. pl.* 319. *fig.* 2.

Hab. Australian Seas.

A beautiful and perfect specimen of a female with ova.

318. *Palæmon serratus*, *Leach.* *Astacus serratus*, *Herbst.*

Fig. Pennant, *Brit. Zool.* iv. *pl.* 16. *fig.* 28. *Palæmon Squilla.*

This specimen has been taken during the process of casting its integument, part of which still adheres to the head. The tumour on the left side of the thorax is produced by the lodgment of a parasitic crustaceous animal (Bopyrus, see *No.* 325.), and it is worthy of remark, that the new semi-transparent crust has been formed over it and is moulded upon it.

319. Palæmon Carcinus, *Oliv. Encycl. Méth. Ins. tom. viii. p. 659.*

sp. 1. Cancer Carcinus, *Fabr.* Indian Prawn.^a

Fig. Encycl. Méth. pl. 292. fig. 2.

319 A. Palæmon Carlislei, *R. O.*

P. rostro utrinque serrato, antennarum squamas æquante ; pedibus secundi paris longissimis, intus muricatis, digitis villosis nigris.

This species is about seven inches in length, of a yellowish colour with shades of brown, and a tinge of red at the tail. The thorax is smooth, with sinuosities marking out the branchial regions, and bidentate on either side. The rostrum, commencing a little beyond the middle of the thorax, extends to the extremities of the squamæ of the antennæ, and is 9-dentate above, and 5-dentate beneath. The exterior antennæ are a little longer than the body; the first joint of the internal antennæ has two spines externally, one near the base, the other at the termination. The first pair of claws is short, slender and didactyle; the second pair is seven inches in length, and cylindrical; these elongated claws bear on their internal aspects numerous elevated points or small tubercles disposed for the most part longitudinally, externally they are scabrous; the fingers are almost as long as the manus, with three or four small teeth (one larger than the rest) at the base of each, and covered with short, thickly set, soft hairs, of a black colour; circumstances which distinguish it materially from the Palæmon ornatus of Olivier (*Encycl. Méth. Ins. tom. viii.*

^a The Palæmon Carcinus of Leach, *Zool. Miscell. ii. pl. 92*, Jamaica Prawn, is a species distinct from the present, for it has a rostrum scarcely equalling in length the squamæ of the exterior antennæ, and tridentate beneath; while in the specimen before me, the rostrum extends beyond the squamæ, and is 6-dentate beneath; the proportions of the second pair of feet and the single tooth on the side of the thorax in the figure given by Dr. Leach, also cause it to deviate from the present specimen; to which the synonyms of Fabricius (*Suppl. Ent. Syst. p. 402. sp. 1. "P. chelis porrectis muricatis, rostro ascendente antennarum squamis longiore"*) and of Latreille (*Hist. Nat. des Crust. et des Ins. vi. p. 260. sp. 10.*), ought to apply, rather than to the Palæmon Jamaicensis of Herbst (*Cancr. ii. tab. 27. fig. 2.*).

p. 660. sp. 5.), which is a New Holland species. Their extremities also are pointed, and incline a little towards each other; whilst the pollex or moveable finger has a slight but gradual curve.

Hab. From a fresh-water swamp in Africa; described as frequently making use of these arms to climb up reeds &c. out of the water.

To the *Donor*, Sir Anthony Carlisle, F.R.S. F.L.S. &c., by whom the Museum is enriched with many beautiful and singular specimens, and Natural Science by valuable contributions, this species is dedicated.

319 B. *Palæmon hirtimanus*, *Oliv.* Hairy-handed *Palæmon*.

Fig. *Encycl. Méth. pl.* 318. *fig.* 2.

Hab. Indian Seas.

319 C. *Palæmon hirtimanus*. Var. *chelâ dextrâ majore*.

In both these specimens a white villosity may be observed on the hand of the larger chela.

ORDO STOMAPODA.

320. *Squilla Mantis*, *Fabr.* Cancer Mantis, *Linn.* Sea Mantis.

Var. *major, pollicibus octo-dentatis*.

Fig. *Encycl. Méth. pl.* 324.

Hab. Mediterranean Sea.

A very fine specimen, fourteen inches long.

321. *Squilla Mantis*.

A small but perfect specimen; the spines of the thumb are in this instance six in number.

321 A. *Squilla maculata*, *Fabr.* Cancer arenarius, *Rumphius*.

Fig. *Encycl. Méth. pl.* 323.

Hab. Indian Ocean; coasts of Abyssinia.

A well-marked specimen, about eight inches in length; thumb with six spines.

321 B. *Squilla maculata*, *Fabr.*

A large example, a foot long; thumb with nine spines.

Hab. Abyssinia.

Donor, Henry Salt, Esq.

322. *Squilla maculata*.

Maculæ very faint; thumb five-toothed.

322 A. *Squilla scabricauda*, *Lam.**Fig.* Encycl. Méth. *pl.* 525. *fig.* 1.*Hab.* Indian Ocean.

Rows of small spines on the segments of the tail: nine spines on the thumb.

323. *Squilla chiragra*, *Fabr.* *Gonodactylus chiragrus*, *Latr.* *Règne**Anim.* iv. *p.* 109. *nouv. ed.**Fig.* Encycl. Méth. *pl.* 325. *fig.* 2. Desmarest, *Sur les Crust.* *pl.* 43.*Hab.* Indian Ocean: the specimen is from Sumatra.

In this species the thumb, unarmed with spines, presents a rounded protuberance at its base, and terminates in a thin, slightly curved process (considered a generic distinction by Latreille).

ORDO AMPHIPODA.

(Gammaridæ.)

323 A. *Gammarus Locusta*, *Leach.**Fig.* Montagu, *Linn. Trans.* ix. *tab.* iv. *fig.* 1. *Cancer Gammarus Locusta.**Hab.* This specimen is from Winter Harbour; the species is common on our coasts, but cannot live out of salt-water.*Donor*, Captain Parry, R.N. 1820.323 B. Numerous specimens of *Gammarus Locusta*, and among them a small *Gammarus loricatus*.*Hab.* Winter Harbour.*Donor*, Captain Parry, R.N. 1820.323 C. *Gammarus loricatus*, *Sabine.**Fig.* *Suppl. App. to Parry's Voyage*, *pl.* 1. *fig.* 7.*Hab.* Winter Harbour.*Donor*, Captain Parry, R.N. 1820.323 D. *Atylus Ampulla*, *Leach.* *Gammarus Ampulla*, *Fabr.**Fig.* *Phipps, Voyage towards the North Pole*, *pl.* 12. *fig.* 2.*Hab.* Arctic Ocean.*Donor*, Captain Parry, R.N.

323 E. *Dexamine Edwardsii*. *Talitrus Edwardsii*, *Sabine*.*Fig.* Suppl. App. to Parry's Voyage, *pl.* 2. *fig.* 1—4.*Hab.* Northern Ocean.

In the number of joints and relative length of the antennæ this species should be considered an *Atylus* of Leach and Desmarest; but in the forms of the rostrum and of the four anterior legs, in the form and position of the eyes, and in general appearance, it so closely resembles the genus *Dexamine* of the same authors (see Desmarest, *Sur les Crustacés*, p. 263.), that it is there referred accordingly. The elongated vesicular branchiæ attached to the base of the feet are well displayed in this specimen.

Donor, Lieutenant Franklin, R.N. 1818.

ORDO LÆMODIPODA.

(Cyamidæ. Whale Lice.)

324. *Larunda Ceti*, *Leach*. *Oniscus Ceti*, *Linn*. Whale's Lice.*Fig.* Müller, Zool. Dan. *tab.* cxix. *fig.* 13—17.*Hab.* On all the Cetacea.324 A. *Larunda Ceti*.

Three specimens of the natural colour; the uppermost is a female, and shows well the four laminae attached to the branchial feet, and protecting the ova.

Vide Savigny, *Animaux sans Vertèbres*, *pl.* v. *fig.* 1. 2. *prem. partie*.

ORDO ISOPODA.

(Epicaridæ. Prawn Lice.)

325. Two Prawns suspended; a portion of integument is removed from the left side of the thorax, exposing *Bopyrus Squillarum* *Latr.*, *Monoculus Crangorum* *Fabr.*

Hab. This Crustaceous parasite is generally found imbedded under the integument of the thorax of the genus *Palæmon* or *Crangon*, with its back applied to the branchiæ; it would seem to be nourished by the animalculæ contained in the water which the motion of the respiratory

organs causes to flow over it. Not more than one is ever found on a single Prawn.

325 A. Bopyrus Squillarum.

It lies at the bottom of the glass; the cavity which contained it is on the right side of the thorax of a young Prawn.

(*Cymothoadæ*.)

326. Cymothoa Œstrum, *Fabr.*

Fig. Pallas, *Spicil. Zool. fasc. ix. tab. iv. fig. 13.*

Hab. European Oceans.

327. Cymothoa Œstrum, with the abdomen laid open.

328. Cymothoa Œstrum?

This species differs from the preceding and from the figure in the *Spicilegia Zoologica*, in the form of its head, which is square, being truncated anteriorly, and not extending beyond the notch of the first segment in which it is lodged; also in the form of the sides of the notch, which are broad anteriorly, and have not their angles rounded off.

329. *Æga emarginata*, *Leach.*

Fig. *Encycl. Brit. Suppl. art. Annulosa, pl. xxi. Pennant, Brit. Zool. iv. tab. xix. fig. 1. Oniscus Psora?*

Hab. ———

329 A. *Idotea Entomon*, *Latr.* *Oniscus Entomon*, *Linn.*

Fig. Pallas, *Spicil. Zool. fasc. ix. p. 64. tab. v. fig. 1. 2. 6.*

A fine specimen, four inches in length.

Hab. Shores of Kamschatka.

Donor, G. Tradescant Lay, Esq.

330. *Idotea tricuspidata*, *Latr.*

Fig. Pennant, *Brit. Zool. iv. tab. xix. fig. 5. Oniscus Entomon.*

This species, and not the preceding, is the *Oniscus Entomon* of Dr. Leach, *Linn. Trans. xi. p. 364, "caudâ apice tridentatâ."*

Hab. Shores of the Baltic, and English coasts, among fuci; it is said to do much injury to the nets of the fishermen. In the smaller specimen, the notches and teeth at the extremity of the tail are but slightly marked.

331. *Idotea Œstrum*, *Leach. Bosc.* *Oniscus Œstrum*, *Gmel.*

Fig. Pennant, *Brit. Zool.* iv. *pl.* xix. *fig.* 6. Pallas, *Spicil. Zool.* ix. *tab.* iv.

"It differs from *Entomon* (*tricuspidata*) in wanting teeth at the extremity of the tail, and having a deep notch instead; the antennæ, too, are evidently shorter."—*Leach.*

Hab. Coasts of Great Britain.

331 A. *Arcturus tuberculatus*, *Latr., Cuv. Règne Anim.* iv. *p.* 139. *nouv. ed.* *Idotea Baffini*, *Sabine.*

Fig. Suppl. App. to Parry's Voyage, *pl.* 1. *fig.* 4—6.

Hab. Baffin's Bay; "brought up in considerable numbers from twenty fathoms depth, coarse sandy bottom, on the west coast of Baffin's Bay, in latitude 71°." *Supplement to Parry's Voyage*, *p.* ccxxviii. *Vide* Sowerby's *Brit. Miscellany*, i. *pl.* 15, evidently another species of this singular genus.

331 B. A very young specimen of the same species.

Class INSECTA.

Subclass MYRIAPODA.

ORDO CHILOGNATHA.

331 C. *Glomeris ovalis*, *Latr.* *Iulus ovatus*, *Linn. Fabr.*

Fig. *Amœn. Acad.* *tab.* iii. *fig.* 4. *Latr. Hist. Nat. des Crust. et des Ins.* vii. *pl.* 59. *fig.* 5. 6.

Hab. Shores of Europe.

332. *Iulus terrestris*, *Latr. Linn. Fabr.*

Fig. *Rœmer, Genera Insect.* *tab.* xxx. *fig.* 15.

Hab. Europe, in sandy places.

332 A. The bottle contains two exotic specimens of *Iuli*. The upper one is of a bright reddish-brown colour, with feet of the same hue, the last segment inclining to white. The antennæ are nearly of the same colour with the body, are seven-articulate, and have a white ring at the extremity of the five proximal joints. This is named, from the latter circumstance,

Iulus annulicornis.

I. rufescens, segmento ultimo submucronato pallido, antennis rufis annulis albis, pedibusque rufescentibus articulis pallidis.

Length of body four inches and a half; about as thick as a goose-quill; number of segments 58.

The lower specimen accords with the characters of *Iulus fuscus* Linn. *Amæn. Acad.* iv. p. 253, except that the terminal joint of the antennæ, being hidden in the penultimate one, appears to have escaped the attention of Linnæus.

332 B. *Iulus vittatus*, R. O.

I. olivaceus, marginibus segmentorum posticis ferrugineis, margine antico segmenti primi aurantio, antennis pedibusque ferrugineis, segmento ultimo inermi.

Length of body four inches and a half, as thick as a swan's quill; number of segments 53.

Hab. Maryland, North America.

This *Iulus* is an exception to the rest of the genus, which are for the most part characterized by some dull uniform colour; it is of a bronze-green colour, with narrow reddish-brown rings at the posterior margin of each segment, forming an agreeable contrast with the bright rufous feet, and the orange-coloured stripe across the front of the first segment. The feet incline to green at their connection with the body. There is no anal mucro. On a close inspection, minute spiraculiform pores may be observed running in a longitudinal row on each side the body. A delicate white line may also be observed running across each segment immediately in front of the brown stripe; and these are connected by three longitudinal lines, one running down the middle of the back, the others in a line with the lateral pores.

333. *Iulus crassus*, Linn. Fabr.

This specimen corresponds in every respect with the Fabrician description:

"Corpus pallescens, utrinque lined e punctis minutissimis nigris, caudâ acutâ."

The minute puncta are pores or outlets for the emission of a slimy secretion, and may be observed in all the preceding specimens, where, however, the dark colour renders them less obvious.

Hab. Asia.

In the specimen the number of segments is 58; of pairs of feet, 110; entire length of body, five inches eight lines.

333 A. A remarkably fine specimen of *Iulus*. *Iulus fuscus*, *Fabr.*?

In length seven inches and a half; number of segments 69.

Hab. India.

Donor, B. Clifton Henderson, Esq. 1821.

ORDO SYNGNATHA.

334. *Cermatia araneoides*, *Illiger*. *Leach*. *Scutigera araneoides*, *Latr.*

Iulus araneoides, *Pallas*.

Fig. Pallas, *Spicil. Zoolog.* ix. *tab.* iv. *fig.* 16.

Hab. Europe, in inhabited dwellings. Antennæ a little longer than the body.

335. *Cermatia longicornis*, *Leach*. *Scolopendra longicornis*, *Fabr.*

Hab. Tranquebar. Antennæ twice as long as the body.

336. *Scolopendra Gigas*, *Leach*, *Linn. Trans.* xii. p. 383. The Gigantic Centipede.

Fig. Browne's *Hist. of Jamaica*, *pl.* 42. *fig.* 4.

Hab. Tropical America.

336 A. *Scolopendra Gigas*.

A robust specimen, eight inches and a half in length.

Hab. ———

Donor, Right Hon. Sir Robert Peel, Bart.

336 B. *Scolopendra Gigas*.

A finer specimen, measuring nine inches and a half from the roots of the antennæ to the vent.

Donor, Right Hon. Sir Robert Peel, Bart.

336 c. *Scolopendra Gigas*.

Donor, William Norris, Esq.

337. *Scolopendra alternans*, *Leach*. *Linn. Trans.* xix. p. 383. *Scolopendra morsitans* of Authors. Alternating Centipede.

Fig. Leach, Zool. Miscell. iii. *pl.* 138.

Length five inches and a half; compare the alternately long and short segments in this specimen with their uniform size in the preceding.

- 337 A. Scolopendra, with subequal segments and a stripe of green at the posterior margin of each.

Hab. ———

Donor, Thomas Keate, Esq. 1811.

338. *Geophilus electricus*, Leach. *Scolopendra electrica*, Fab. The Luminous Centipede.

Fig. De Geer, Insect. vii. *pl.* xxxvi. *fig.* 17.*

Hab. The specimen is from Sumatra.

339. *Geophilus electricus*.

A larger specimen of the Luminous Centipede.

Hab. ———

"The shining of the *Scolopendra electrica* I have always observed to be accompanied by the appearance of an effusion of a luminous fluid upon the surface of the animal, more particularly about the head, which may be received upon the hand, or other bodies brought into contact with the insect at the moment, and these exhibit a phosphoric light for a few seconds afterwards. This fluid, however, I never could discover in the form of moisture, even upon the clearest glass, although examined immediately with the most scrupulous attention by a lens; it must therefore be extremely attenuated."—Macartney, on Luminous Animals, Phil. Trans. 1810.

Subclass ARACHNIDA.

(*Nymphonidæ*.)

- 339 A. *Nymphum gracile*, Leach. The Slender Nymphum.

Fig. Leach, Zool. Miscell. i. *pl.* 19. p. 45.

Hab. The British Seas.

- 339 B. *Nymphum hirtum*, Fabr. The Hairy Nymphum.

Fig. ———

Hab. Northern Seas.

Donor, Capt. Buchan, R.N.

339c. *Nymphum Grossipes*, *Sabine*.

Fig. See Captain Sabine's description p. ccxxiv. of the Supplementary Appendix to Parry's Voyage 1819—20, to which this specimen corresponds; the figure in the *Zoologia Danica tab. cxix.* besides the differences pointed out by Captain Sabine, has the extreme joints of the mandibles much less curved and the legs are more slender than in the specimen.

340. *Pycnogonum Balænarum*, *Lam. Leach*. *Phalangium Balænarum*, *Linn*.

Fig. Müller, *Zool. Dan. tab. cxix. fig. 10—12.* Pennant, *Brit. Zool. iv. tab. xix. fig. 7.*

Hab. European Ocean. On whales, and sometimes on fuci.

(*Pseudo-scorpionidæ* Latr.)

340 A. *Chelifer Latreillii* *Leach*?

Fig. *Zool. Miscell. iii. pl. 142. fig. 2.*

Hab. "Minute animals found in a dunghill in Dorsetshire, brought by Mr. Griffiths to Sir Everard Home, Oct. 5, 1818."

Donor, Sir Everard Home, Bart. 1818.

(*Scorpionidæ*.)

341. *Scorpio Afer*, *Linn*. *Buthus Afer*, *Leach*. The Great Scorpion.

Fig. Herbst, *Monogr. Scorp. tab. i.**

Each pecten has eighteen teeth.

Hab. East Indies, Ceylon, &c.

342. *Scorpio Afer*, in a pregnant state.

Pectens with thirteen teeth on one side, and fifteen on the other, two of which next the mesial line are of a darker colour than the rest and appear ready to fall off.

342 A. *Scorpio Afer*.

A female distended with young, and, excepting the chelæ, thorax and tail, of a pale colour.

Pectens 17-dentate.

343. *Scorpio Afer*.

A female with numerous young ones of which it is said to be the mother. The Scorpion produces its young alive (the ova being hatched in the matrix) to the number of from twenty-six to forty according to Redi ; but Maupertius and Leon Dufour have counted upwards of sixty. These are at first entirely white, but very soon acquire the brown and dusky tints. Pectens 18-dentate.

344. A young *Scorpio Afer*.

The pectens have acquired only eight teeth.

345. *Scorpio occitanus*, Latr.

Fig. Herbst, *tab.* iii. *fig.* 3.*

Hab. Tropical America.

The pectens have lost some of their teeth ; but, calculating from the space that is left, each had originally more than twenty.

346. *Scorpio americanus*, Linn. Latr.

Fig. Roesel, *Ins.* ii. *tab.* lxvi. *fig.* 5. *Der Surinamische Scorpion.*

Hab. Tropical America.

Pectens 18-dentate.

346A. Small Scorpions from Ceylon ; of the same size and habit as the preceding, but of a darker colour. *Scorpio punctatus* ?

Fig. De Geer, *Mém.* *Ins.* vii. *tab.* xli. *fig.* 1. *Scorpion ponctue.*

Hab. Ceylon.

Donor, Dr. John Davy, F.R.S. &c.

347. *Scorpio gracilis*, De Geer.

Fig. De Geer, *Mém.* *Ins.* vii. *pl.* xli. *fig.* 5.

Hab. America.

(*Tarantulidæ.*)

348. *Thelephronus caudatus*, Latr.

Fig. Seba, *Mus.* i. *tab.* lxx. *fig.* 7—8. Pallas, *Spicil. Zool. fasc.* ix. *tab.* iii. *fig.* 1. 2.

Hab. Tropical America.

349. *Phrynus reniformis*, *Latr. Hist. Nat. des Crust. et des Ins.* vii. p. 133. *Tarantula reniformis*, *Leach. Fabr.* The Kidney-shaped Scorpion-spider.

Fig. Pallas, *Spicil. Zool. fasc. ix. tab. iii. fig. 3. 4.* Browne's Jamaica, *pl. 41. fig. 3.* *Tarantula* 1.

Hab. Tropical America.

- 349 A. *Phrynus palmatus*, *Latr.* *Phalangium palmatum*, *Herbst.* The Palmate Scorpion-spider.

Fig. Herbst, *Naturg. Phalang. tab. iv. fig. 2.†* “*Cette espèce pourroit bien n'être qu'une variété du jeune âge de la précédente. Les 3^e, 4^e, 5^e articles de ses palpes paroissent être plus courts et plus larges, le 4^e surtout.*”—*Latr. Hist. Nat. des Crust. et des Ins.* vii. p. 136.

The figure in the *Encycl. Méth. pl. 344. fig. 2.* represents the carpi of the chelæ too thick, and the second pair of legs too short by an inch, compared with the specimen.

- 349 B. *Phrynus medius*, *Latr.* *Phalangium medium*, *Herbst.* The Intermediate Scorpion-spider.

Fig. Herbst, *tab. iv. fig. 1.*

A fine specimen of this species; the second pair of legs (pedes antenniformes) measure five inches and a half, the length of the animal's body is one inch and a quarter.

(*Araneidæ.*)

350. *Mygale avicularia*, *Latr.* *Aranea avicularia*, *Linn.* The Tarantula Spider, *mas.*

Fig. *Latr. Hist. Nat. des Crust. et des Ins.* vii. *pl. 62. fig. 1.*

Hab. Tropical America.

On the terminal joint of the pedipalpi may be seen the tubercle and hook turned downwards, which characterize the male of this species.

351. *Mygale avicularia*, *fam.*

The hairs in this specimen are very long; a circumstance, *Latreille* remarks, peculiar to young individuals. The same unpleasant effects have been ascribed to these hairs, as are produced on the skin by those of some caterpillars.

352. *Mygale avicularia*.

Hab. The West Indies.

353. *Mygale Blondii*, *Latr.*? *mas.*

Fig. *Latr. Genera Crust. et Insect. i. pl. 5. fig. 1.*

Hab. Cayenne.

On a close inspection the small black spines on the legs, which distinguish this species from the preceding, may be observed.

354. *Mygale Blondii*, *Latr.*? *fœm.*

In this and the preceding specimens it may be observed that the hairs have been detached from the upper part of the body chiefly, as if rubbed off by going out of, or retiring into, a narrow aperture.

355. *Mygale nidulans*, *Latr.* *Aranea nidulans*, *Fabr.* *Aranea atra nitida*, *abdomine hirto nigro*, *Mant. Ins. tom. i. p. 343. no. 5.*
Aranea venatoria, *Entom. Syst. ii. p. 408. sp. 7.*

Fig. *Browne, Jam. pl. 44. fig. 3. 3 b.* and in *Shaw's Naturalist's Miscellany*, xv. *pl. 614*, copied from the figures in *Browne* without any reference to plate or figure, and called *Aranea venatoria*. That name, however, does not belong to the species figured, but ought to apply only to *pl. 44. fig. 2.* of *Browne*, and to the species described in the 12th edition of the *Syst. Nat.* p. 1035. No. 33. which belongs to the modern genus *Thomisus* of *Walcknaer* and *Latreille*.

356. *Mygale nidulans*, *Latr.*

A specimen of a lighter colour than the preceding.

356 A. *Mygale nidulans* and its nest.

The latter is a cylindrical tube, about six inches in length and one inch in diameter. Its texture is like thin tissue paper; thickened at the upper part with additional layers of a brown colour, and adherent portions of earth. The operculum is connected by a continuation of the outer brown matter, and of the inner layer of silken substance over it, and presents externally the appearance of a succession of laminæ of progressively increasing size, like the exterior of an oyster-shell.

Hab. Found on Whiting sugar plantation Jamaica, and presented by Walter Huey, Esq. M.R.C.S. March 1830.

Fig. "This sort is represented of the natural size, as well as the nest

(*pl.* 44. *fig.* 3 a.) and both its valves ; which are so well contrived, and so strongly connected, that whenever they are forced open, the native elasticity of the ligaments that fix them restores 'em immediately to their usual position.

“It is most frequent in the loose rocky soils, and nestles under ground. Its nip is very painful for many hours, and sometimes raises a fever and deliriums ; but these are commonly eased by throwing the patient into a moderate sweat, which is commonly done with a little warm rum punch among the negroes, who are most subject to these accidents : this puts them soon to sleep, and in a few hours they are quite recovered.” *Browne's Jamaica*, p. 420.

In the specimens preserved in the collection, the hinge of the operculum manifests none of that elasticity described by Browne : if lifted up, the operculum falls down over the mouth of the nest by its own weight merely, and falls as readily in the contrary direction if the position of the nest be altered.

356 B. A double Nest with valvular lids of the Nidificating Tarantula Spider.

Mus. Brookes, Catal. p. 99. no. 21 y.

357 J. B. Dolomedes ———. *Latr. Genera Crust. et Insect.* i. p. 117. Aranea, Linn.

Hab. India.

This specimen is about one-half the size of *M. avicularia* ; its legs are armed with long slender black spines.

357 A. Dolomedes ———.

Same species as the preceding. The enlarged extremities of the pedipalpi, containing the male organs of generation, denote the sex.

358. Dolomedes ———.

A large female specimen.

359. Dolomedes ———.

This specimen shows the manner in which the spiders of the genus *Dolomedes* protect and carry the egg-bag, attached under the thorax.

360. The Egg-bag of Dolomedes ———.

361. *Dolomedes* ——.

Of a lighter colour and a little longer than the preceding specimens.

362. *Epeira Clavipes*, *Walknaer*, *Tab. des Aran.* p. 54. *Aranea Clavipes*, *Fabr.*

Fig. Browne, *Jam. tab.* 44. *fig.* 4.

Hab. Jamaica.

Its web is of a yellow silk, and so strong that birds are entangled in it, and even man is said to have some trouble to disengage himself from it.

363. *Epeira Clavipes*.

A female. The abdomen is laid open on one side.

364. *Epeira Diadema*, *Walck.* *Aranea Diadema*, *Linn.*

Fig. Shaw, *Naturalist's Miscell.* ix. *pl.* 308. *Latr. Hist. Nat. des Crust. et des Ins.* vii. *tab.* lxiv. *fig.* 1. 2.

Hab. Europe. It is the largest and most elegant of the British species.

365. *Aranea nobilis*, *Shaw*.^a

Fig. *Naturalist's Miscell.* ix. *pl.* 336. "Of this beautiful species I have observed a specimen in the Museum of the late Mr. John Hunter. The thorax is of an elegant orange colour spotted with black; the abdomen of a bright yellow, with larger deep black spots; the legs half black and half yellow. The specimen is preserved in spirits of wine, and was received from Sumatra." *Shaw, ut supra.*

The lower specimen in the glass appears to be a young *Dolomedes*. See No. 357, &c.

366. *Epeira tuberculata*, *Walck.*

With part of its egg-bag.

367. *Epeira sericea*, *Walck.*

Fig. *Hist. des Aran. fasc.* 3. *pl.* 2.

Hab. "Elle est originaire du midi de la France, et habite aussi, à ce qu'il paraît, le Senegal." *Audouin in Dict. Classique d'Hist. Nat.* vi. p. 204.

368. *Epeira mammata*, *Walck.* *Aranea mammata*, *DeGeer.*

Hab. The Antilles.

^a This is not the *Aranea nobilis* of Fabricius *Suppl. Entom. Syst.* p. 291.

369. *Epeira mammata*.

Two females. In the lower specimen, where the abdomen is much distended, the eminences seem to be in consequence less prominent.

370. *Epeira fasciata*, *Walck.*

Hab. South of Europe.

370 A. *Epeira* ———.

Hab. ———

Donor, J. P. Vincent, Esq. 1828.

(*Gammasidæ*).

370 B. *Gammasus Gymnopteronum*, *Kirby*. *Acarus Gymnopteronum*,
Fabr. Ent. Syst. iv. p. 432. no. 37.

Fig. DeGeer, *Ins. vii. tab. vii. fig. 9. Mite des Bourdons.*

Hab. Found infesting a Humble-bee, chiefly about the head and over the eyes, impeding its flight.

“*Apis terrestris*, when labouring under acariasis from the numbers of a small mite (*Gammasus Gymnopteronum*) that infest it, will take its station in an ant-hill, where, beginning to scratch and kick and make a disturbance, the ants immediately come out to attack it, and falling foul of the mites, they destroy or carry them off; when the bee, thus delivered from its enemies, takes its flight.” *Kirby and Spence, Introd. to Entom. ii. p. 268.*

Found at Lancing, October 1817, and presented by Mr. Clift.

370 c. *Gammasus Coleoptratorum*, *Latr.* *Acarus Coleoptratorum*,
Linn. Fabr. Ent. Syst. iv. p. 432. no. 38.

Fig. DeGeer, *Ins. vii. tab. vi. fig. 15.*

Numerous specimens infesting a *Cetonia*, caught near Hampstead.

Donor, Mr. R. Owen.

(*Acaridæ*.)

371. *Ixodes* ———; allied to *Ixodes reduvius*, *Leach.* *Acarus reduvius*,
Linn.

Body testaceous; head and feet rufous; margin of the abdomen subcrenate.

Hab. Found on the skin of a *Manis*.

372. A similar but longer specimen, on the scale of a Manis.

373. *Ixodes Ricinus*, Leach, Linn. Trans. xi. p. 397. n. 3. *Acarus Ricinus*, Linn. Dog-tick.

Hab. Europe; adhering with tenacity to dogs. It is also called Cow-louse, being often found on cattle.

373 A. *Ixodes splendens*, R. O.

I. orbiculato-planiusculus, maculis tribus viridi-æneis post caput in semicirculo dispositis, supra lineis punctatis ejusdem coloris minus nitidis; abdomine subcrenato.

This beautiful species of Tick has a semicircular mark separating as it were the thorax and abdomen, which is composed of three distinct spots that reflect green and orange tints with a metallic lustre: similar but less brilliant hues are reflected from lines which radiate to the circumference of the body.

Length of body three lines and a half; breadth three lines.

Hab. The Sumatran Tiger; the specimens were attached to the skin behind the ears.

Donor, Mr. Clift.

373 B. *Ixodes splendens*.

Hab. Attached to a portion of skin from the inside of the prepuce of the Sumatran Tapir.

Donor, Mr. Clift.

373 C. *Ixodes splendens*.

Hab. Three specimens from the vulva and perineum of a Rhinoceros. The lower one exhibits the colours of the preceding specimens; the other two, probably from having cast their skins, are of a dull brown hue, and partly transparent. All these specimens were found on opening a barrel containing skins of the above-named animals preserved in spirits; they were, notwithstanding, firmly attached to them.

Donor, Mr. Clift.

374. *Ixodes Iguanæ. Acarus Iguanæ, Fabr. Forsan Acarus auratus, Shaw, Nat. Misc. iv.*

Hab. The skin of an Iguana.

Subclass APTERODICERA. (Ametabolia, *Leach*. Apterous Hexapods, *Kirby*.)

ORDO PARASITA.

375. *Phthirus inguinalis*, *Leach*. *Pediculus Pubis*, *Linn*.

Fig. Redi, *Exper. tab. xix. fig. 1. Pediculus inguinalis*.

Hab. "Hospitatur in hominis immundi pube, superciliis: pellitur oleo tabaci." *Fabr*.

Several hairs from the pubis, with the animal and its nits or eggs.

375 A. Many specimens of *Phthirus inguinalis*.

376. Nits or Ova of *Phthirus inguinalis*.

377. *Hæmatopinus Suis*, *Leach*. *Pediculus Suis Scrofæ*, *Linn*. The Swine-louse.

Fig. *Leach*, *Zool. Miscell. iii. pl. 146*.

Hab. On the Hog.

378. *Nirmus Meleagris*, *Leach*. *Pediculus Meleagris*, *Linn*. The Turkey-louse.

Fig. *Frisch*, *Ins. 8. tab. iv.†*

Hab. On the Turkey.

379. *Nirmus Columbæ*, *Leach*. *Pediculus Columbæ*, *Linn*. The Dove-louse.

Fig. *Albin. Aran. tab. xliii. Redi, Exper. tab. ii. fig. 1. Pulex Columbæ*.

Hab. On the Dove.

380. *Nirmus Columbæ*. The Dove-louse.

381. *Nirmus Gruis*, *Leach*. *Pediculus Gruis*, *Linn*. The Crane-louse.

Fig. *Redi, Exp. tab. iii. Pulex Gruis*.

Hab. In the Crane.

Subclass ALATA.

ORDO COLEOPTERA.

(*Cicindelidæ*.)

382. *Megacephala Carolinensis*, *Latr. Genera Ins. i. p. 175. Cicindela Carolina*, *Fabr*.

Hab. In Carolina.

(Carabidæ.)

- 382 A. *Thermophylla marginata*, Leach. *Anthia marginata*, Klug.
sp. 8. p. 347.

Hab. The specimen is from Abyssinia.

Donor, Henry Salt, Esq.

(Dytiscidæ.)

383. *Hydaticus sticticus*, Leach. *Dytiscus sticticus*, Fabr.

Hab. Barbadoes.

- 383 A. *Dytiscus limbatus*, Fabr. fœm.

Hab. China.

Mus. Brit.

384. Larva of *Dytiscus marginalis*.

Fig. Roesel, Insect. Aquat. ii. tab. i. fig. 5. 6. 7.

Hab. Europe; in fresh waters.

(Staphylinidæ.)

385. *Staphylinus olens*, Fabr. The Great Rove-beetle.

Fig. Panz. Faun. Insect. Germ. fasc. 27. fig. 1.

Hab. Europe; at the roots of trees, and under stones. The ova of this species are remarkable for their great size.

(Buprestidæ.)

386. *Buprestis gigantea*, Fabr. The Great Buprestis.

Fig. Oliv. Ins. 32. pl. 1. fig. 1. a. b. Merian, Insects of Surinam, tab. i.
lowest figure; perfect insect and larva.

Hab. America and Asia.

The larva resides near the roots of plants; and when fully grown, lies dormant for some time in a small cavity beneath the surface of the earth, where it undergoes its metamorphoses.

387. *Buprestis ignita*, Linn. Fabr. Flaming Buprestis.

Fig. Oliv. Ins. 32. pl. 4. fig. 33.

Hab. The East Indies.

388. *Buprestis* ———.

An elegant little specimen; in length six lines, with four round spots on

each elytrum reflecting gold and green; one situated at the base, the second and third on a line above the middle, the fourth a little below the middle of the elytrum.

Hab. ———

389. *Buprestis Chrysis*, *Fabr. Oliv.*

Fig. Oliv. Ins. 32. *pl.* 2. *fig.* 8. a. d. e; and *pl.* 6. *fig.* 52. b. Shaws, Nat. Miscell. xxiv. *pl.* 1060, where it is called Chestnut-shelled Indian *Buprestis*: but *Buprestis castanea*, to which this name ought properly to apply, has a blackish body, whereas the *Buprestis Chrysis* has a brilliant golden-green body.

Hab. India.

390. *Buprestis sternicornis*, *Linn. Fabr.*

Fig. Oliv. Ins. 32. *pl.* 6. *fig.* 52. a.

Hab. India.

391 J. B. *Buprestis duodecim-maculata*, *R. O.*

B. atra, *pollinosa*; *elytris atris*, *maculis sex testaceis*.

Length of body sixteen lines.

Body elongated, subtriangular, tapering posteriorly, inferiorly slightly pubescent, superiorly strewed over or painted, as it were, with a white powdery substance. *Head* grooved down the middle between the eyes. *Antennæ* dark at the base, of a lighter colour at the apex. *Thorax* black, with testaceous sides, the anterior margin canaliculate, indented laterally, posteriorly, and down the middle. *Elytra* black and shining, where they are not obscured by the white powder; bases impressed with points, from which punctuated furrows are continued a short way down the elytra; sides canaliculate for about half their length; apices unarmed: they have each six testaceous maculæ, one, namely, at the humeral angle of a crescent shape, one irregularly transverse over the scutellum, the third and fourth on the same transverse line a little before the middle of the elytra; the fifth, behind the middle, transverse, and extending nearly but not quite to the suture; the sixth also transverse, and then continued along the margin of the elytrum to its apex. *Post-pectus* and *feet* black.

Hab. New Holland.

(Elateridæ.)

391 A. *Elater noctilucus*, *Linn. Fabr.* The Fire-fly.*Fig.* Oliv. Coleopt. ii. 31. *pl.* 2. *fig.* 14.*Hab.* Several fine specimens from the Hooghly river, Bengal. Sent from India by Mr. Lecos, to the
Donor, Sir Everard Home, Bart.

A strong light is thrown out from the two spots on the thorax, as well as from two others concealed by the elytra.

“On dissecting the organs of light on the *Elater noctilucus*, I found that there is a soft yellow substance, of an oval figure, lodged in the concavity of the yellow spots of the corselet, which parts are particularly thin and transparent in this species. This substance is so remarkably close in its structure, that at first view it appears like an inorganic mass; but with a lens it is readily perceived to be composed of a great number of very minute parts or lobules closely pressed together. Around these oval masses the interstitial substance of the corselet is arranged in a radiated manner, and the portion of the shell that immediately covers the irradiated substance, is in a certain degree transparent, but less so than that which covers the oval masses: it is therefore probable that the interstitial substance in this situation may be endowed with the property of shining.”
Macartney, On Luminous Animals, Phil. Trans. 1810.

(Lampyridæ.)

391 B. *Telephorus* —, *Schæff. Leach.* *Cantharis* —, *Linn. Fabr.*

A small species, called the “Smaller Fire-fly of Bengal” by the
Donor, Sir Everard Home, Bart.

Hab. These specimens are from the coast, Bengal.

391 C. *Lampyris* —.

A female, two-thirds of an inch in length; called the “Glow-worm of Botany Bay” by the

Donor, Sir Everard Home, Bart.

(Cleridæ.)

392 J. B. *Clerus fasciculatus*, *Schreibers.* *Attelabus*, *Linn.*

Fig. *Linn. Trans.* vi. *pl.* 20. *fig.* 6.

Hab. New Holland.

(Geotrupidæ.)

393. *Geotrupes stercorarius*, *Latr. Genera Insect.* ii. p. 92. *Scarabæus stercorarius*, *Linn. Fabr.* Dung-chaffer.

Fig. Panz. Faun. Ins. Germ. *fasc.* 49. *fig.* 1.

Hab. Europe, "boring cylindrical holes beneath the dung, and flying about in the dusk of the evening." *Samouelle.*

(Scarabæidæ Latr.)

394. *Dynastes Hercules*, *MacL. Kirby, Linn. Trans.* xiv. p. 567. *Scarabæus Hercules*, *Latr. Linn.* *Geotrupes Hercules*, *Fabr.* Great Hercules Beetle.

Fig. Oliv. Entom. i. no. 3. *pl.* 1. *fig.* a. b. d. *mas.* *pl.* 23. *fig.* 1. c. *fæm.*

Shaw, Nat. Miscell. i. *pl.* 34.

Hab. Tropical America.

395. *Dynastes Hercules.*

396. *Dynastes Hercules.*

This specimen measures six inches from the end of the thoracic horn to the anus. See Roesel, Ins. ii. *Scarab.* i. *tab.* A. *fig.* 1. iv. *tab.* v. *fig.* 3.

- 396 A. Larva of *Dynastes Hercules.*

Mus. Heaviside, No. 1928.

397. *Dynastes Gideon.* *Scarabæus Gideon*, *Latr. Linn.* *Geotrupes Gideon*, *Fabr.*

Fig. Roesel, Ins. ii. *Scarab.* i. *tab.* A. *fig.* 5.

Hab. Sumatra.

- 397 A. *Dynastes Pan*, *MacL.* *Scarabæus Pan*, *Latr. Linn.* *Geotrupes Pan*, *Fabr.*

Hab. India. A male and female specimen.

Donor, Mr. Chambers.

398. *Dynastes* —, *fæm.*

Hab. Sumatra. Length of body, one inch eight lines.

399. *Dynastes* —, *fæm.*

Hab. Sumatra. Length of body, two inches.

400 J. B. *Dynastes* ———.

Hab. South America.

401. *Oryctes Silenus*, *Illiger*, *Latr.* *Geotrupes Silenus*, *Fabr.*

Hab. South of Europe. The specimen appears to be an immature or newly excluded imago. The elytrum or wing-cover of one side is removed to expose the delicate transverse-folded wing beneath.

402. *Trichius* ———.

Hab. Barbadoes.

403. *Trichius viridulus*, *Fabr.*

Fig. Oliv. Ins. i. 6. 63. 76. *pl.* 9. *fig.* 86.

Hab. "In India. Mus. D. Hunter." *Fabr. Entom. Syst.* i. b. p. 122.

404. *Cetonia aurata*, *Fabr.* *Scarabæus auratus*, *Linn.* Green Garden Beetle or Rose-chaffer.

Fig. Shaw, Nat. Miscell. xviii. *pl.* 758.

Hab. Europe, "not uncommon during the hottest part of summer, frequenting various plants and flowers. Its larva is commonly found in the hollows of trees, or among the loose dry soil at their roots. It remains about three years before it changes to a chrysalis," out of which in a short time afterwards emerges the perfect insect.

405. *Gymnetis nitida*, *MacL.* *Cetonia nitida*, *Fabr.*

Fig. Oliv. Ins. *pl.* 3. *fig.* 16., *pl.* 7. *fig.* 56.

Hab. Carolina. South America.

In the same glass, below this specimen, is

Phanæus Vindex, *MacL.*

Hab. ———

406 J. B. *Anoplognathus Donovanii*, *Leach.* "New Holland Cetonia,"

Dr. Shaw. fœm.

Fig. Donovan, Ins. of New Holland.

Hab. New Holland.

407. Pupa of a *Scarabæus*.

408. Pupa of a *Scarabæus*; less advanced.

409. Pupa of a *Scarabæus*.

410. Pupa of a Lamellicorn Beetle, probably a *Cetonia*.
411. *Melolontha vulgaris*, *Fabr.* *Scarabæus Melolontha*, *Linn.* The Common Cock-chaffer.
Fig. Oliv. Entom. i. 5. *pl.* 1. *fig.* 1.
Hab. Europe. Common on trees in May and June.
 See *Gallery*, No. 619. Digestive canal of this species.
412. Larva of *Melolontha vulgaris*.
 The larvæ of the Cock-chaffer feed on the roots of grass and corn. The complete insect makes its appearance towards the commencement of the summer of the fourth year from the period of its exclusion from the egg.
413. *Melolontha vulgaris*.
 The larva laid open behind to show the *corpus pinguosum* and the intestines distended with food.
 (*Lucanidæ.*)
414. Larva of *Lucanus Cervus*.
 The skin is dissected from one side.
415. Larva of *Lucanus Cervus*.
 It has been taken in the act of casting its skin, part of which is removed on one side to show the soft new-formed integument beneath. This process of shedding the exuviae takes place in most larvæ three or four times before they enter the pupa state. For the exceptions to this rule, and an account of the process, see Kirby and Spence, *Intr. to Entom.* iii. p. 191.
416. *Lucanus Cervus*, *Linn. Fabr. mas.* Stag-Beetle.
Fig. Oliv. Entom. i. *pl.* 1. *fig.* 1. a. b. c. d.
Hab. Europe; in decayed wood.
- 417 J. B. *Lamprima ænea*, *Latr.* *Lethrus æneus*, *Fabr.* *Lucanus æneus*, *Schreibers.* *Mas*, var. *paulo minor*, et color *viridi-æneus cum nitore aureo pulcherrimo*.
Fig. Linn. Trans. vi. *tab.* xix. *fig.* 9—11.
Hab. New Holland? "A beautiful specimen of this rare and singular species."

- 417 A. *Passalus interruptus*, *Fabr. Latr.*? *Lucanus interruptus*, *Linn.*

Fig. DeGeer, *Mém. Ins.* iv. *pl.* 19. *fig.* 13.

Hab. America.

(*Pimelidæ.*)

418. *Moluris striata*, *Latr.* *Pimelia striata*, *Fabr.*

Fig. Olivier, *Entom.* iii. *no.* 59. *pl.* 1. *fig.* 11.

Hab. Africa.

419. *Moluris striata.*

This specimen has a round yellow spot on the middle of the ventral surface of the abdomen.

(*Helopidæ.*)

- 420 J. B. *Helops*, *Fabr. Latr.*

Hab. ———

(*Curculionidæ.*)

421. *Entimus festivus*? *Curculio festivus*, *Fabr. Entom. Syst.* i. b.

p. 476?

Hab. Barbadoes.

Length of body one inch. *Rostrum* short; *thorax* brown above, dotted with white, and with white sides; *elytra* white, with brown sutures and margins, and four longitudinal brown lines, the exterior line the shortest, the one next to it branching into two, half-way down the elytrum, the other two of nearly equal length but not extending to the apex; *abdomen* white; legs brown, with unarmed thighs.

422. *Entimus festivus*?

The same with or allied to the preceding, but rather smaller.

423. *Curculio longipes*, *Fabr.*

Fig. Oliv. *Ins.* 83. *pl.* 15. *fig.* 191.

Hab. Cape of Good Hope.

424. *Rhina barbirostris*, *Latr.* *Lixus barbirostris*, *Fabr. Syst. Eleut.*

ii. *p.* 501.

Fig. Oliv. *Entom.* *pl.* iv. *fig.* 37 a. b.

Hab. Africa and India.

(*Prionidæ.*)

425. *Prionus maxillosus*, *Fabr.*

Fig. Drury, Ins. i. tab. xxxviii. fig. 3. Cerambyx maxillosus.

Hab. America.

426. Larva of a Prionus.

See *Gallery*, No. 3059. 3060. 3061. Larva and pupæ of *Prionus cervicornis*, the Stag-horned Capricorn Beetle.

427. Larva of a Prionus : *an cervicornis?*

428. Larva of an exotic Prionus.

Length of body four inches ; of a pale yellow colour ; segments diminishing in breadth, but increasing in length from the head to the tail.

(*Cerambycidae.*)

429. *Lamia Ædificator*, *Fabr.*

Hab. India.

430. *Monochamus*, *Megerle.* *Lamia*, *Fabr.*

An immature specimen of the imago.

430 A. *Stenocorus trilineatus*, *Fabr. Syst. Entom. 1775. p. 179. sp. 6.*

Fig. Drury, Ins. i. pl. 41. fig. 1. Cerambyx trilineatus.

Hab. West Indies ; feeds on the Cocoa-nut tree.

Donor, Mr. S. Stutchbury.

430 B. *Stenocorus trilineatus.*

Donor, Mr. S. Stutchbury.

430 c. *Macropus pictus*, *Leach. Thunberg.* *Cerambyx longimanus*,
Linn. mas. Painted Capricorn Beetle.

Fig. Leach, Zool. Miscell. ii. pl. 89.

Hab. South America. The male of this species is remarkable for the disproportionate length of the fore-legs.

Donor, Sir Everard Home, Bart. 1813.

431 J. B. Pupa of an exotic *Cerambyx* (*Linn.*).

432. Larva of a *Cerambyx* (*Linn.*).

433. Exotic Larva. *Cerambyx*, *Linn.*

Length of body three inches ; the first three segments with alternate bands of brown and yellow ; bands of the same colour, but much fainter, on the remainder.

(Chrysomelidæ.)

434. *Megalopus* —, *Fabr.*?

The specimen wants the head. *Elytra* semitransparent, margins folded inwards towards the apex, and covering the sides of the post-pectus, but not embracing the abdomen; *post-pectus* gibbous and projecting; posterior *femora* remarkably incrassated, kidney-shaped, the concavities looking inwards, and armed at their extremities with three spines; *tibiæ* of the same pair curved and ending in a spine. Body and thighs of a light brown colour; *tibiæ* and tarsi black.

435. *Timarcha tenebricosa*, *Leach.* *Chrysomela tenebricosa*, *Fabr.*

Fig. Schæf. *Icon. pl.* 126. *fig.* 1.

Hab. The plants of Southern Europe.

(Fam. dub.)

436 J. B. Larva of a Coleopterous insect.

Length of body one inch and a half. Colour a reddish brown; smooth.

437. Coleopterous Larva; probably of *Dermestes Lardarius*.

438 J. B. Larva of a Coleopterous insect in its case.

The case is composed of pieces of twigs, from half an inch to an inch in length, cemented together by a dark-brown substance the thickness of pasteboard; the length of the whole case six inches, the breadth in the middle one inch.

The larva is of a deep yellow colour, and about half the length of the case, to which it is attached at one end by its tail, its head hanging loose in the middle.

Hab. New Holland.

439 J. B. Larva, Pupa, and Pupa-case of a Coleopterous insect.

The pupa-case, in length one inch and three-fourths, is oblong, rounded at both ends, of the thickness of parchment, and of a deep brown colour, with an irregular surface, shining and reflecting grayish silvery tints.

The larva is one inch and a half in length, and appears to be in the state preparatory to casting its skin.

Hab. New Holland?

440 J. B. Larvæ of a Coleopterous insect.

Two inches in length, black, rugose, hirsute; with an incurvated and pointed tail.

441. Larva of a Coleopterous insect.

Clothed with short and thick reddish-brown hair, like fur.

441 A. Larva of a Coleopterous insect.

Six inches in length, clothed with abundant long, silky, reddish-brown hairs.

Mus. Leverian. no. 4150.

442. Cell of a Coleopterous pupa.

ORDO DERMAPTERA. *Kirby.*

443 J. B. Larva of Forficula gigantea.

ORDO ORTHOPTERA. *Kirby.^a*

444. Blatta americana, *Linn. Fabr.* American Blatta, or Common Cockroach.

Hab. America. It has now become naturalized in Europe.

445. Blatta orientalis, *Linn. Fabr.* Oriental Blatta.

Fig. Geoff. Ins. i. pl. 7. fig. 7.

See *Gallery*, No. 616. Digestive canal displayed.

Hab. The specimen is from Sumatra. This species is also naturalized in Europe, and is called the Cockroach.

446. Blatta nivea, *Linn. Syst. Nat.* ii. 688. 5. Snow-white Blatta.

Fig. Drury, Ins. ii. pl. 36. fig. 1.

Hab. America.

447. Blatta dilatata, *R. O.*

B. ferrugineo-fusca albido-limbata, thorace explanato, supra punctis duobus impresso.

A broad, depressed species^b. Length of body two inches; prothorax anteriorly emarginate, with remarkably dilated sides; legs reddish-brown.

Hab. New Holland. The specimen, a female, apterous.

^a The original order of Olivier included the preceding.

^b In Catesby's "Carolina" (ii. pl. 10. fig. 6.) is a figure of a Blatta nearly resembling this species in form; but there is no appearance of a white margin in the Plate, nor any mention of it in the description.

448 J. B. *Blatta dilatata*.

Also a female, but not fully grown.

Hab. New Holland.

449 J. B. *Blatta dilatata*.

A larva, scarcely half-grown.

Hab. New Holland.

450. *Blatta* ———.

A pupa, with rudimentary elytra.

451. Larva of a *Blatta*.

(*Mantidæ*.)

451 A. *Phasma cornutum*, *Guilding*. *Phasma filiforme*, *Lichtenstein*.
Mantis filiformis, *Fabr.* Filiform Spectre Insect.

Fig. Browne, *Hist. of Jamaica*, *pl.* 42. *fig.* 5. *Linn. Trans.* xiv. *pl.* 7. *fig.* 1—10.

Hab. "Frequentissimè in Americæ mediæ insularumque oppositarum dumetis, ubi ramulos emortuos æmulat, hostesque sic decipit. Noctua folia avidè consumit. Ambulat motu omnino vacillanti: dum quiescit pedes anticos capiti applicat, antennisque teneras defendit. Vitæ tenax. Succi virides vel pallidi." *Rev. L. Guilding*, *Linn. Trans.* xiv. *p.* 138.

Neither in the specimen, nor in the figures quoted, are the first pair of legs quite so long as the body; *fere* or *prope* therefore should precede the *longitudine corporis* of the character given by Lichtenstein^a.

Donor, Thomas Keate, Esq.

452. *Phasma Ferula*, *Licht.* *Mantis Ferula*, *Fabr.* Walking-stick
Mantis.

Fig. Roesel, *Ins.* ii. *Gryll*, *tab.* xix. *fig.* 10.

Hab. South America. The extremities of the humeri and femora have small spines.

^a Lichtenstein, who knew only the male of this species, suspects that another *Phasma*, described as a distinct species (*Ph. Ramulus*) may prove to be but the female. The Rev. Lansdown Guilding, of the island of St. Vincent, has shown that the supposition is in part correct; but he describes the female of *Phasma filiforme* as identical with the *Phasma cornutum* of Lichtenstein (*Linn. Trans.* vi. *p.* 10. no. 3.), and accordingly proposes to retain this as the *nomen triviale* of the species; objecting to the appellation *filiforme* as applicable almost alike to all the males of the apterous Phasmata, but at variance with the form of the female of this species.

- 452 A. *Phasma angulatum*, *Licht.* *Mantis angulata*, *Fabr.*
Length of body seven inches two lines. Two spines on the posterior part of the first two and the last abdominal segments; numerous spines on the back of the thorax.
453. *Phasma angulatum*?
A specimen of equal length with the preceding, but with a much thicker body. The spines on the dorsum of the thorax are few and small; there are none on the abdominal segments; but with these differences it partakes, with the preceding specimens, of all the characters of *Mantis angulata*, *Fabr.*
454. *Phasma angulatum*? in its pupa state (or *Phasma Gigas*).
455. *Phasma 2-spinosa*. *Mantis 2-spinosa*, *Fabr. Syst. Entom.* 1775.
p. 274. n. 4.
Mus. Dom. Hunter.
Very probably the identical specimen described by the great entomologist, although the characters "*Caput viride, thorax viridis, dorso flavescente, elytra viridia margine exteriori flavo, alæ rufescentes, margine exteriori viridi*" are now, after fifty years maceration, lost, and the colours have sunk into a dull uniform brown.
456. Larva of *Phasma Gigas*.
457. Larva of *Phasma lateralis*, *Licht.* *Mantis lateralis*, *Fabr.*
Fig. Stoll, *Mant. tab. x. fig. 36. 37.*
Hab. Brasil.
- 457 A. *Phyllium brevicorne*, *Latr.* *Mantis siccifolia*, *Linn.* The Short-horned Walking-leaf Insect.
Fig. Donovan, *Hist. of the Insects of India, fasc. 8. pl. 3.^a*
Mus. Brookes. See *Catal. no. 27 y.*
458. *Mantis precaria*, *Fabr. Entom. Syst. 2. p. 20. no. 32.* *Lichtenstein, Linn. Trans. vi. p. 26. no. 19.*

* The figure given by Dr. Shaw in the *Naturalist's Miscellany*, iv. pl. 119. is not the *Mantis siccifolia* of Linnæus (*Mus. Lud. Ulric. p. iii.*), unless the shortness of the antennæ be a sexual variety merely, but is the insect which Lichtenstein has described in the *Linnæan Transactions*, vi. p. 17, (*Phasma citrifolium*), figured in *Roesel, Locusta Indica, tab. xvii.*, and distinguished from the preceding species by its setaceous elongated antennæ.

Fig. Stoll, Mant. *pl.* 17. *fig.* 62.

Hab. America. The colour has nearly disappeared from this specimen, and the spirit, viewed against a white surface, has a slight green tinge; the single ferruginous spot on each elytrum remains.

458 A. *Mantis precaria.*

Hab. Demerara. A more recent specimen, with the colours consequently more perfect.

Donor, Sir Everard Home, Bart.

459 J. B. *Mantis quadrimaculata, R. O.*

Length of body four inches and a half. Antennæ setaceous, half the length of the thorax; eyes prominent, unarmed; thorax trihedral, serrate laterally, for a short distance from the head; elytra and wings of equal length, extending little more than half way down the abdomen, the former marked with two dark spots; colour (lost in the specimen by long maceration in spirits).

Hab. New South Wales.

460. *Mantis Simulacrum, Fabr. Licht.*

Fig. Stoll, Mant. *tab.* xii. *fig.* 49.

Hab. India.

461. *Mantis oratoria, Fabr. Ent. Syst.* 2. *p.* 20. *n.* 31. ? *Licht. in Linn.*

Trans. iv. *p.* 28. *n.* 26. *mas.*

Hab. Throughout the torrid and temperate zones.

462. *Mantis* ———.

Allied to *Mantis oratoria*; but the colours have disappeared.

463 *Mantis* ———.

To which Dr. Shaw has given the synonym *filiformis* of Fabricius, which is a *Phasma* with unarmed cubitus, whereas this is a true *Mantis* with the spined cubitus, differing however from the *Mantis Filum* of Lichtenstein in having wings.

(*Achetidæ.*)

463 A. *Gryllotalpa vulgaris, Latr. Acheta Gryllotalpa, Fabr. Gryllus Gryllotalpa, Linn.* The Mole-cricket.

Fig. Panz. Faun. Insect. Germ. *fasc.* 88. *tab.* 5.

Hab. Europe: burrowing in the soil of gardens and cultivated places.

When, in these situations, the young plants are observed to droop and die without any obvious cause, they may be found, on carefully removing them from the soil, to have had their roots divided. This act of the Mole-cricket renders it a great pest to gardens; but there is some doubt whether the roots of plants constitute its food, or are only detached when they happen to obstruct its route in search of worms or insects.

For the means of destroying it see "Nouveau Dict. d'Hist. Nat., art. *Courtilière*.

Donor, Mr. Clift.

464. *Gryllotalpa vulgaris*, *mas*.

One wing is expanded.

464 A. *Gryllotalpa vulgaris*, *mas*.

Donor, I. P. Vincent, Esq.

465. *Gryllotalpa vulgaris*.

A female impregnated. The ova are deposited in June and July in round cavities, six or seven inches below the surface of the ground.

466. Pupa of *Gryllotalpa vulgaris*.

466 A. *Acheta domestica*, *Fabr.* House-cricket.

Fig. Panz. Faun. Ins. Germ. *fasc.* 88. *pl.* 6. *mas*.

Hab. Europe, in houses, generally in the neighbourhood of the kitchen chimney. The note of the Cricket proceeds from the male only, and is produced by rapid friction of the elytra;—like the tick of the Death-watch (*Anobium*, F.), it is indicative of sexual propensities.

Donor, Sir Wm. Blizard, 1818.

467. *Acheta domestica*.

A female impregnated. Observe the length of the ovipositor.

Fig. Panz. Faun. Ins. Germ. *fasc.* 88. *pl.* 7.

468 J. B. Pupa of an *Acheta*, *affinis domesticae*.

469. *Gryllus monstrosus*, *Drury*, *Latr.* *Acheta monstrosa*, *Fabr.*

Fig. Drury, Ins. ii. *pl.* 43. *fig.* 1. 2.

470. *Gryllus monstrosus*.

The elytra unfolded to show their length.

471. *Gryllus monstruosus*.

A specimen of a lighter colour than the preceding.

472. Larva of *Gryllus monstruosus*.

The trophi or instrumenta cibaria are displayed in this specimen.

473. Larva of a *Gryllus*: *an monstruosus*?474. Larva of a *Gryllus*, *affinis præcedenti*, *fæm*.

(*Acrididæ*.)

475. *Acrida viridissima*, *Kirby*. *Locusta viridissima*, *Fabr. Latr.*

Fig. Roesel, *Insect. ii. tab. x. xi.*

Hab. Europe.

476. *Acrida*^a *femorata*. *Locusta femorata*, *Fabr.*

Fig. Stoll, *Sauterelles à Sabr. tab. vi. a. fig. 22. p. 16. Sauterelle à larges cuisses.*

Hab. Tranquebar, *Stoll*; the specimen is from Sumatra. The crenate membranaceous margins of the femora are ciliate.

477. *Acrida reticulata*. *Locusta reticulata*, *Fabr.*

Front part of the head granulate, vertex acuminate, occiput rounded, smooth; prothorax granulate above; the ovipositor, being an inch in length, does not seem to accord with the term "ensis brevis" of Fabricius; but, this circumstance excepted, the other characters of the specimen agree with those of *Locusta reticulata*, *Fabr. Entom. Syst. ii. p. 40. sp. 28.*

Hab. Guadaloupe.

478. *Pterophylla myrtifolia*, *Kirby*. *Locusta myrtifolia*, *Fabr.*

Fig. Drury, *Ins. ii. pl. 41. fig. 2.*

Hab. America.

479. *Pterophylla myrtifolia*.480. Pupa of an *Acrida*, *Kirby*.481. *Truxalis nasutus*, *Fabr.* *Gryllus nasutus*, *Linn.*

Fig. Roesel, *Locusta Indica*, *Præf. tab. iv.*

Hab. Sumatra.

^a See *Zool. Journal*, i. p. 429.

482. *Truxalis nasutus*.

483 J.B. *Truxalis brevicornis*, *Fabr.*? *Gryllus brevicornis*, *Linn.*

Amæn. Acad. vi. p. 398. n. 37.

Fig. DeGeer, *Ins.* iii. *tab.* 14. *fig.* 7. *Acridium ensicorne*.

Hab. Tropical America.

484 J.B. *Truxalis brevicornis*, *Fabr.*?

(*Locustidæ*.)

484 A. *Locusta migratoria*, *Kirby*. *Acridium emigratorium*, *Latr.*

Gryllus migratorius, *Linn. Fabr.* Migratory Locust.

Fig. Roesel, *Ins. Gryll. tab.* xxiv.

Hab. "In Tartaria, inde migrans variis annis in Europam, destruens vegetabilia omnia." *Fabr.* Stragglers have reached our own coasts, but, happily, they are rare visitors.

Donor, Henry Salt, Esq. 1811.

484 B. *Locusta migratoria*.

A larger specimen.

Donor, Henry Salt, Esq. 1811.

485. Pupa of *Locusta migratoria*.

The oral organs displayed.

486. Larva of *Locusta morbillosa*. *Gryllus morbillosus*, *Linn. Fabr.*

487. Larva of *Locusta morbillosa*, a little more advanced.

488. Pupa of a large *Locusta*.

489. *Locusta morbillosa*.

Fig. Roesel, *Locusta Indica*, *tab.* xviii. *fig.* 6.

Hab. Sierra Leone.

490. *Locusta microptera*. *Acridium micropterum*, *Latr.* Short-winged Locust.

Fig. Palis. Beauv. *Insect d'Amér. et d'Afric. Orthopt. tab.* iv. *fig.* 4.

Hab. Southern provinces of the United States.

490 A. *Locusta Dux*, *Kirby*. *Acridium Dux*, *Latr.*

Fig. Drury, *Ins.* ii. *pl.* 44.

Hab. Tropical America.

Donor, Sir William Blizard, 1811.

- 490 B. *Locusta serrata*. *Acridium serratum*, *Oliv.* The Saw-crested Locust.

Hab. Abyssinia.

Donor, Henry Salt, Esq.

ORDO HEMIPTERA.

(*Cimicidæ*.)

- 491 J. B. *Pentatoma Capensis*, *Oliv.* *Cimex valgus*, *Fabr. Syst. Ent.*
p. 708. n. 54.

Fig. *Encycl. Méthod. Ins. pl.* 124. *fig.* 1.

Hab. Cape of Good Hope.

492. *Pentatoma femoratum*, *Oliv.* *Cimex femoratus*, *Fabr. Syst. Ent.*
p. 708. n. 55.

Hab. India.

- 493 J. B. *Reduvius regalis*, *Latr.* *Cimex regalis*, *Fabr. Syst. Ent.*
p. 697. n. 3.

Hab. New Holland.

494. *Reduvius serratus*, *Fabr.* *Cimex cristatus*, *Linn.*

Fig. Drury, *Ins. ii. pl.* 36. *fig.* 6. *Cimex carinatus*. Rømer, *Genera Insect. tab. x. fig.* 12.

Hab. Tropical America.

(*Cicadiadæ*.)

- 494 A. *Cicada plebeia*, *Linn.* The Common Cicada.

Fig. Shaw, *Nat. Miscell. iii. pl.* 10.

Hab. Warmer parts of Europe.

Donor, Mr. R. Owen.

- 495 J. B. *Cicada Australasiæ*, *Donovan.*

Fig. Don. *Ins. of New Holland.*

Hab. New Holland.

- 496 J. B. *Cicada Australasiæ.*

This is the species noticed by Dr. Shaw in the *General Zoology* (vi. part i.

p. 152.), and called *Cicada viridis*, a name which had already been applied by Fabricius to another species, a native of Europe.

These insects have been noted in almost every age for the loud tones which they emit; the organ of sound is peculiar to the male. See Kirby and Spence, *Introd. to Entom.* ii. p. 405.

497. *Cicada septendecim*, *Oliv.* *Tettigonia septendecim*, *Fabr.* Seventeen-years Cicada.

Fig. *Phil. Trans.* liv. p. 65. *tab.* viii.

498. *Cicada septendecim*; *mas et fæm.*

Hab. "Is seen annually in Pennsylvania; and at certain periods, of fourteen or fifteen years distance, they come forth in such great swarms, that the people have given them the name of *Locusts*." *Collinson in Phil. Trans.* liv. Kalm remarks (*Acta Holm.* 1756.), that the periods of their great abundance occur at intervals of seventeen years; from which circumstance the trivial name is derived.

499. Pupa of the *Cicada septendecim*.

"About the latter end of April these *Cicadæ* come near the surface: this is known by the hogs routing after them. They creep out of the ground, near the roots of trees, in such numbers, that in some places the earth is so full of holes, it is like a honey-comb. Their first appearance is an hexapode (an ill-shapen grub) with six feet. This is their middle or nymph state; they creep up everything near them, and fix their claws fast on the shrubs and bark of trees: then the skin on its back bursts open, and the fly comes forth, disengaging itself by degrees, leaving the case or exuviae behind in the exact shape in which it was before occupied." *Collinson in Phil. Trans.* liv. p. 65.

500. Pupa of *Cicada splendidula*, *Oliv.*

501. *Fulgora candelaria*, *Linn. Fabr.*

Fig. *Roesel, Ins.* ii. *tab.* xxx. *fig.* 1. 2. 3.

Hab. China.

- 501 A. *Fulgora lanternaria*, *Linn.* The Lanthorn Fly.

Fig. *Roesel, Ins.* ii. *tab.* xxviii. xxix.

Hab. The Tropics.

Donor, Sir Everard Home, Bart.

ORDO NEUROPTERA.

(Libellulidæ.)

502. Libellula —, Linn. Fabr.

Fig. Reaumur, Mém. Ins. tab. vi. pl. xxxv. fig. 2.

Hab. Europe.

503. Larva of a Libellula.

(See the description of the extraordinary conformation of the mouth of these larvæ in Kirby and Spence, *Introd. to Entom.* iii. p. 126.)

504. Agrion Virgo, Fabr. Libellula Virgo, Linn.

Fig. Roesel^a and Panzer^b have each figured varieties of this species, but the loss of colour in the specimen precludes a reference.

Hab. Indigenous.

(Ephemeridæ.)

- 504 A. Ephemera vulgata, Linn. Fabr.

Fig. DeGeer, Mém. Ins. ii. pl. 16. fig. 1. *Ephemera vulgata, cauda tristeta, alis nebuloso-maculatis.*

Hab. Throughout Europe, near rivers and pools. The specimens were collected in Hampshire.

Donor, William Long, Esq.

(Myrmeleonidæ.)

505. Myrmeleon formicarium, Linn. Ant-Lion.

Fig. Reaumur, Mém. Insect. vi. tab. xxxiv. fig. 7.

Hab. Europe.

The singular habits of the larvæ of this species have attracted peculiar notice. See Latreille, *Hist. Nat. des Crust. et des Ins.* xiii. p. 23. Kirby and Spence, *Introd. to Entom.* i. p. 425.

(Hemerobidæ.)

- 505 A. Termes fatale, Linn.
- ^c
- Fabr.

^a Ins. ii. Aquat. tab. ix. fig. 7. Var. a. Latr.

Ditto ——— fig. 6. Var. c. Latr.

Ditto ——— fig. 5. Var. d. Latr.

^b Faun. Ins. Germ. fasc. 79. pl. 18. Var. b. Latr.^c *Termes fatale* of Linnæus includes many distinct species. See Latreille, *Gen. Crust. et Ins.* iii. p. 203.

Numerous fine specimens of Termites, from Africa, with the wings perfect.

Donor, Mr. Clift.

506. *Termes fatale*.

A female; the two lower wings have fallen off, and lie at the bottom of the bottle.

507. *Termes fatale*.

A female taken after the fall of the wings; these are acquired a short time previous to the development of the reproductive energy, and fall off soon after.

508. *Termes fatale*.

In a similar state, the abdomen beginning to enlarge.

509. *Termes fatale*.

A female impregnated.

509 A. *Termes fatale*.

A female with the abdomen in a full state of distension. The disproportionate size of this part is very remarkable. The ovaries unravelled may be seen in the *Gallery*, No. 2864.

Donor, B. Clifton Henderson, Esq. M.D.

510. *Termes*.

Three specimens of a species distinct from the preceding: to one of these some young ones are attached.

See the history of these singular insects in *Phil. Trans.* 1781. by Mr. Smeathman, and a comprehensive account drawn from that and other sources in Kirby and Spence, *Introd. to Entom.* ii. p. 32.

ORDO HYMENOPTERA.

(*Evaniadae*.)

511. *Evania, affinis Appendigastræ*.

Black with ferruginous petiolate abdomen, and very long hind legs.

Hab. The specimens are from Barbadoes.

(*Ichneumonidae*.)

512. A group of small Ichneumons. (*Cynips, Geoffroy*.)

(Cynipsidæ.)

513. An Oak-leaf with twelve galls or nidi of *Cynips Quercus folii*,
Linn. Fabr. Latr. Diplolepis Quercus folii, Geoffroy, ii.
pl. 15. fig. 2.

Some of the galls are opened and the ova exposed. The singular mechanism of the ovipositor, by which the female insinuates her eggs under the coverings of plants, is described by Reaumur, *Mém. sur les Insectes*, iii. p. 483. *pl. 46 & 55.*

These appearances in vegetables, and the cells produced in the hides of cattle by the lodgment of the larvæ of *Æstri*, were often adduced by Hunter to illustrate his opinions on the nature of the inflammatory processes which follow the introduction of foreign bodies into a living organism, according to the possession or want of the vital principle in those bodies. See *On the Blood, &c. p. 208.*

With respect to the galls of vegetables, Hunter, after describing No. 60. 61. Morbid Series, said: "A similar power is observable in vegetables. Here is an oak-leaf which I picked up in my garden: you observe on it seven or eight protuberances exactly circular and uniform. These have been formed by the insertion of the eggs of an insect into the leaf, and I cannot but think that the process would have been very different, if it had been any substance not possessed of the living principle which had been thus inserted." *Parkinson's MSS. Notes, i. p. 122.*

(Chrysidæ.)

514. *Stilbum splendidum, Latr. Chrysis splendida, Fabr.*
Fig. Donovan's Insects of India.
Hab. New Holland, Tranquebar.

(Formicidæ.)

515. *Formica* —, *Fabr.*
 A group of some small species of Ant, probably British.

(Sphegida.)

516. *Pepsis, Latr. Fabr.*
Hab. Sumatra.

517. *Sphex*, *Fabr.*

Hab. ———

518. *Sphex*, *Fabr.*

Hab. ———

(*Scoliadae*.)

519. *Scolia ciliata*, *Fabr.*

Hab. Spain.

(*Bembecidae*.)

520. *Stizus speciosus*, *Latr.*

Hab. ———

Mus. Brit.

(*Vespidae*.)

520 A. *Eumenes petiolata*, *Latr.* *Vespa petiolata*, *Fabr.*

Hab. Malabar.

Donor, Sir Everard Home, Bart.

520 B. *Eumenes conica*, *Latr.* *Vespa conica*, *Fabr.*

Hab. China.

This and the preceding specimen are marked "From New South Wales."

Donor, Sir Everard Home, Bart.

521. *Vespa cincta*, *Fabr. Latr.*

Fig. Sulz. Hist. Ins. tab. xxvii. fig. 5.†

Hab. Tranquebar; the specimen is from Sumatra.

522. *Vespa affinis*, *Fabr. Latr.*

Hab. This specimen is also from Sumatra.

523. *Vespa Crabro*, *Linn. Fabr.* The Hornet.

Hab. Europe.

524. *Vespa Crabro*; two females.

525. *Vespa vulgaris*, *Fabr.* The Common Wasp.

Hab. Europe.

See *Gallery*, No. 2353. 2354. Male wasp, and male organs of generation.

No. 2920. 2921. Queen wasp, and oviducts.

526. *Vespa media*, *Oliv. Encycl. Méth. Insect. vi. p. 679. no. 48.*
Fig. DeGeer, *Mém. Ins. ii. pt. 2. pl. 27. fig. 2. 3. 4.*
Hab. Europe. Suspends its nest beneath the eaves of dwellings.

527. A small species of *Vespa*.

(*Apidæ.*)

528. *Xylocopa latipes*, *Latr.* *Apis latipes*, *Linn.* The Broad-legged Carpenter-bee.

Fig. Drury, *Ins. ii. pl. 48. fig. 2.*

Hab. China and the East Indies; the specimen is from Sumatra.

See *Gallery*, No. 2595. *Xylocopa violacea*, a female; the oviducts exposed.

529. *Xylocopa Brasilianorum*, *Latr.* Brasil Carpenter-bee.

See *Gallery*, No. 2349. A fine male of this species; the male organs dissected.

530. *Megachile centuncularis*, *Latr.* *Apis centuncularis*, *Linn.* The Leaf-bee.

Fig. Reaum. *Ins. vi. pl. 10. fig. 2. 3. 4. 5. Abeilles coupeuses des feuilles.*

Hab. Europe. The under part of the abdomen being thickly set with short yellow hairs, enables it the better to gather and transport the pollen of flowers.

531. *Megachile centuncularis. fæm.*

The species of *Xylocopa* are solitary bees, and have no neuters or modified females called labourers. In genus *Megachile* the male serves for fecundation only, while the business of nidification and providing for the larvæ is performed by a solitary female. The nest she makes is a small cylindrical cavity excavated in the soil, or in decayed wood, and lined by pieces of leaf (generally the rose- or strawberry-leaf) of an oval shape; an egg and a quantity of farina being deposited here, they are covered by other portions of leaves, which form the floor of another cell, and so the process is repeated four or five times.

532. *Megachile Campanularum*, *Latr.* *Apis Campanularum*, *Kirby.*
 The Leaf-bee or Leaf-cutter.

Hab. Common in Europe.

A male; mandibles bidentate.

533. *Anthophora Acervorum*, *Latr. Hist. Nat. des Crust. et des Ins.* xiv.
p. 45.?

Fig. Panz. Faun. Ins. Germ. fasc. 78. pl. 18.

534. *Bombus terrestris*, *Latr. Fabr.* *Apis terrestris*, *Linn.* The
Humble-bee. Two males.

Fig. Linn. Trans. vi. pl. 25. fig. 8. mas.

Hab. Common in Europe.

535. *Bombus terrestris*.

Males, having nearly completed their pupa state.

536. *Bombus terrestris*. Queen Humble-bee.

Fig. Linn. Trans. vi. pl. 25. fig. 7.

See *Gallery*, No. 2884. Young Queen Humble-bee; the female organs exposed.

537. *Bombus terrestris*. Labourers.

Fig. Linn. Trans. vi. pl. 25. fig. 9.

The glass contains also *Bombus Hortorum*, and an *Apis*.

538. *Bombus terrestris*.

Group of the larvæ in oval cases; one laid open exhibiting its inhabitant.

The Humble-bee deposits its ova in the cells of a subterranean habitation, commonly to be found in meadows or hedge-rows.

See M. Huber in *Linn. Trans.* vi. p. 214; and Kirby and Spence, *Intr. to Entom.* i. p. 498.

539. *Bombus terrestris*.

Two groups of nidi; some are laid open to expose their contents: a number of larvæ lie at the bottom of the glass, in various stages of growth.

540. Nidi of Humble-bees.

Fig. Linn. Trans. vi. tab. 27. The undermost cells are those first formed.

541. Cells with larvæ of Humble-bees.

542. Irregular Alveolæ, hexagonal, pentagonal, quadrilateral, and triangular, forming part of the nest of some social hymenopterous insect.

543. *Apis mellifica*, Linn. *Geoff. Fabr.* The Hive-bee: *mas*, Drone.

Fig. Swammerdam, *Bibl. Nat. tab. xvii. fig. 4.* Reaumur, *Ins. v. tab. xxii. fig. 2.*

Hab. Europe. Occasionally found wild, constructing its nest in hollow trees.

See *Gallery*, No. 2336. Penis of the male bee; No. 2335. 2337. 2340.

Testes, &c. "The male bee is considerably larger than the labourers; he is even larger than the queen, although not so long when she is in her full state with eggs: he is considerably thicker than either, but not longer in the same proportion: he does not terminate at the anus in so sharp a point; and the opening between the two last scales of the back and belly is larger, and more under the body, than in the female. His proboscis is much shorter than that of the labouring bee.—He has no sting." *Hunter, Obs. on Bees, Phil. Trans. 1792. p. 173.*

543 A. *Apis mellifica*, *fæm.* The Queen-bee.

Fig. Swammerdam, *Bibl. Nat. tab. xvii. fig. 3.* Reaumur, *Ins. v. tab. xxii. fig. 3.*

See *Gallery*, No. 2889. Oviducts of the queen-bee; and 2887. the same parts fully impregnated.

Below this specimen, and in the same glass, is

Apis mellifica, *operaria*, Labourer, or Female Non-breeder. *J. H.*

Phil. Trans. 1792. p. 139.

Fig. Swammerdam, *Bibl. Nat. tab. xvii. fig. 1.* Reaumur, *Ins. v. tab. xxii. fig. 1.*

"The queen, the mother of all, in whatever way produced, is a true female, and different from both the labourers and the male. She is not so large in the trunk as the male, and appears to be rather larger in every part than the labourers. The tongue of the female is considerably shorter than that of the labouring bee, more like that of the male: however, the tongues of the labourers are not in all of an equal length, but none have it so short as the queen.

"The size of the belly of the female varies very considerably; she is of a different size and shape in the summer to what she is in the winter; and in the winter she has what may be called her natural size and shape: she is upon the whole rather thicker than the labourer; and this thickness is also in the belly, which probably arises from the circumstance of the oviduct being in the winter pretty large, and the reservoir for semen full.

The termination of the belly is rather more peaked than in the labourers, the last scale being rather narrower from side to side, and coming more to a point at the anus. The scales at this season are more overlapped, which can only be known by drawing them out. In the spring and summer she is more easily distinguished: the belly is not only thicker, but considerably longer than formerly, which arises from the increase of the eggs. We distinguish a queen from the working-bee simply by size, and in some degree by colour; but this last is not so easily ascertained, because the difference in the colour is not so remarkable in the back, and the only view we can commonly get of her is on this part; but when a hive is killed, the best way is to collect all the bees and spread them on white paper, or put them into water in a broad, flat-bottomed, shallow, white dish, in which they swim; and by looking at them singly she may be discovered. As the queen breeds the first year she is produced, and the oviducts never entirely subside, an old queen is probably thicker than a new-bred one, unless indeed the oviducts and the eggs form in the chrysalis state, as in the silk-worm, which I should suppose they did. The queen is perhaps of the smallest size just as she has done breeding, for as she is to lay eggs by the month of March, she must begin early to fill again; but I believe her oviducts are never emptied, having at all times eggs in them, although but small. She has fat in her belly similar to the other bees. The queen has a sting similar to the working-bee."

Hunter, ut supra, p. 169. 170.

Donor, Sir William Blizard.

544. *Apis mellifica, operaria.* A Wax-making Labourer.

The wax is secreted in small cells beneath the ventral segments, through the membrane of which it transpires. The specimen exhibits the arrangement of six scales of wax on the abdomen. According to Huber there are two kinds of labourers; *nursers*, which remain in the hive and tend to and feed the young; and *wax-makers*, which go abroad and collect materials for the habitation and support of the community.

545. *Trigona, Latr.* *Apis, Fabr.*

A group of this genus with very brilliant colours resembling the Chrysidæ.

Hab. ———

545 A. *Trigona, Latr.* *Apis, Fabr.*

Hab. Four specimens of a very small species from New South Wales.

ORDO LEPIDOPTERA.

(Papilionidæ.)

546. *Pontia Cratægi*, *Fabr.* *Pieris Cratægi*, *Latr.* *Papilio Cratægi*, *Linn.* The Black-veined White Butterfly.

Hab. Europe. "In England it is found in the woods near London; its larva feeds on the white-thorn." *Samouelle, Entomologist's Useful Companion*, p. 236.

547. Pupa of *Papilio Chrysippus*, with the immature or newly excluded imago.

548. *Papilio*.

A smooth larva, one inch and two-thirds in length. Each segment has a black band, as in *Papilio Machaon* (Swallow-tailed Butterfly); but if it belong to that species, it has lost its original green colour.

549. *Papilio*.

A smooth larva, three inches and a half in length, with two small (or retracted) occipital spines, and two long and ciliated caudal spines, allied to the larva figured in Plate 32 of Merian's *Insects of Surinam* (*Satyrus Cassiæ*).

550. *Papilio*?

An exotic smooth larva, four inches long; original colour probably lost; prolegs cuneiform, the edges ciliated.

551. *Papilio*?

A very remarkable and beautiful exotic larva. It is four inches in length, of a pale ferruginous colour, studded with numerous pearl-coloured iridescent specks; with a row of short spines, of the same colour with the body, across each segment.

552. A larva of the same species; colour rather deeper.

See *Gallery*, No. 1302. where this species has been selected for the display of the nervous system.

(Sphingidæ.)

553. *Sphinx* —, *Fabr.*

An imperfect specimen of the imago.

- 553 A. *Acherontia Atropos*. *Sphinx Atropos*, *Fabr.* Death's-head Moth.

Fig. Roesel, *Ins.* iii. *tab.* i. 1.

Hab. The specimen is from Downpatrick, County Down, Ireland. "An unusual number of these insects were observed in various parts of England and Ireland this season: (October 18th, 1825.)" *Note with the specimen.*

Donor, Robert Moore, Esq.

- 553 B. Pupa of *Acherontia Atropos*.

Mus. Brookes. *Catal.* p. 99. no. 2 y.

554. Larva of *Smerinthus ocellatus*, *Latr.* *Sphinx ocellata*, *Linn.*
Eyed Hawk-moth.

555. Larva of *Deilephila Euphorbiæ*, *Ochs.* *Sphinx Euphorbiæ*, *Linn.*
The Spotted Elephant of Collectors.

556. Larva of *Deilephila Euphorbiæ*.

557. Larva of *Sphinx Cnotheræ*.

Fig. Merian, *Insects of Surinam*, *pl.* 34.

It is remarkable for bearing, in the place of the anal horn, a "callous eye-like plate."

558. *Sphinx*?

Larva with a remarkably conical-shaped head.

- 559 J. B. *Sphinx*?

Larva, allied to the preceding specimen, in the act of casting its skin.

560. *Sphinx*?

A small larva, having just cast its skin.

- 561 J. B. Larva *Sphingis*.

Fig. Shaw, *Nat. Miscell.* xiv. *pl.* 578.

The skin of this larva is thickly covered with small pointed processes, but it is more remarkable for "the singular appearance of the tail or terminal joint of the body, which is so formed as to bear a striking resemblance to a formidable head, with a wide mouth and black prominent eyes." *Shaw, ut supra.*

The specimen is suspended with the head downwards.

562 J. B. Sphinx ?

Larva of a very deep green colour, of the same species as the preceding.

563 J. B. Sphinx ?

Larva of the same species, apparently soon after a moult; it has lost the lateral black tubercles from the anal segment.

564 J. B. Sphinx ?

Larva, probably the same species as the preceding.

565. Sphinx ?

Larva, four inches and a half long, of a pale yellow colour, and with a short anal horn.

566. Sphinx ?

An exotic larva, allied to the preceding; the skin is beginning to separate from the anterior part of the body.

567. Sphinx ?

A large exotic larva, apparently undergoing one of its latest moultings.

568. A small Larva of a Sphinx or Bombyx.

569. A small Larva of a Sphinx or Bombyx.

(*Bombycidae*.)

570. Bombyx, *Fabr.*

Hab. ———

571. Bombyx Mori, *Fabr. Latr.* *Phalæna Mori*, *Linn.* The Silk-worm Moth.

Fig. Reaum., *Ins.* ii. *tab.* v. *fig.* 2.

Hab. "In moro Chinæ. Tempore Imperatoris Justiniani primo in Europa introducta." *Fabr. Syst. Entom.* p. 567.

572. Larva of Bombyx Mori.

573. Bombyx Mori.

Larva, with the skin dissected off one side.

574. Larva of *Cerura Vinula*, *Leach.* *Bombyx Vinula*, *Latr.* *Phalæna Vinula*, *Geoff.* The Puss-moth.

"The insect lately mentioned, the Puss-moth,—is remarkable for its singular forked tail, entirely dissimilar to the anal termination of the abdomen of most other caterpillars. This tail is composed of two long cylindrical tubes, moveable at their base, and beset with a great number of short stiff spines. When the animal walks, the two branches of the tail are separated from each other, and at every step are lowered so as to touch the plane of position; hence we may conclude that they assist it in this motion, and supply the place of hind legs. If you touch or otherwise incommode it, from each of the above branches there issues a long, cylindrical, slender, fleshy, and very flexible organ of a rose colour, to which the caterpillar can give every imaginable curve or inflexion, causing it sometimes to assume even a spiral form. It enters the tube, or issues from it, in the same manner as the horns of snails or slugs. These tails form a kind of double whip; the tubes represent the handle, and the horns the thong or lash, with which the animal drives away the ichneumons and flies that attempt to settle upon it. Touch any part of the body, and immediately one or both the horns will appear and be extended, and the animal will, as it were, lash the spot where it feels that you incommode it. DeGeer (i. 322.), from whom this account is taken, says, that this caterpillar will bite very sharply." *Kirby and Spence, Intr. to Entom. ii. p. 252.*

575. J. B. Bombyx?

A small Larva, with four elongated pointed processes at the caudal extremity, and the first pair of legs produced in a similar form; besides which there is a row of fleshy processes on each side of the body.

576. Larva of a Bombyx.

577. Bombyx?

A small tuberculated and hairy Larva.

578. Bombyx?

Small hairy Larvæ.

579. Bombyx?

Small hairy Larvæ of another species.

580. Bombyx?

A small hairy Larva.

581. *Bombyx*?

Larva, with reddish-brown hairs set upon tubercles alternately nearer the anterior and posterior margin of each segment, as in *Arctia ocularia*. See *Kirby and Spence, Intr. to Entom.* iii. p. 175.

582. *Bombyx*?

A small white Larva, with short white hairs, arranged as in the preceding specimen, but less thickly set.

583.

An exotic Larva, three inches long, of a dun colour, and remarkable for short white bristles, which project in a radiated manner from a central stem; each segment bearing a transverse row of these fasciculi.

584.

A similar specimen, in which, as in the preceding, it may be observed that the hairs or bristles are most thickly set on the two extremities of the larva.

585.

A small Larva, with a transverse row of small spines on each segment.

585A.

A singular thick-bodied Larva, two inches and a half in length, of a light brown colour. Each segment bears six short dermal appendages arranged at equal distances, so as to form as many longitudinal rows; the intermediate ones on the three first and last segments terminate in tubercles beset with short black spines; the inferior ones are so long as to touch the plane of position and terminate in a single black spine, probably serving as supporters; all the others have one or two short black spines; the occiput has a transverse row of tubercles.

586.

A dark brown Larva, two inches two-thirds long; on each segment (except the last, which has four, and the first, which has none,) there are six short spines. On the second and third segments they are of the same colour as the body; the rest are white.

587.

A Larva allied to the preceding, but larger, and with longer spines.

587 A.

A brown Larva, four inches in length, with long white spines arranged as in the preceding specimen.

Donor, Thomas Keate, Esq.

588. Larva of *Bombyx regalis*, *Fabr.*

Fig. Catesby, Nat. Hist. of Carolina, ii. pl. 94. *Eruca maxima cornuta*.

Hab. Southern provinces of the United States.

On each segment there is a transverse row of spines, or spine-bearing processes; those of the second and third segments are remarkable for their length and formidable aspect; the rest are very short.

The Larva which is dissected for the lateral muscles, *Gallery*, No. 56, is of this species.

589. *Bombyx regalis*.

A similar specimen of the Larva, but of a lighter colour.

"The Giant Caterpillar of a large North-American Moth (*Bombyx regalis*, *F.*) is armed behind the head and at the back of the anterior segments with seven or eight strong curved spines from half to three-fourths of an inch in length. Mr. Abbott tells us that this caterpillar is called in Virginia the Hickory-horned Devil, and that when disturbed it draws up its head, shaking and striking it from side to side; which attitude gives it so formidable an aspect, that no one, he affirms, will venture to handle it, people in general dreading it as much as a rattle-snake. When, to convince the Negroes that it was harmless, he himself took hold of this animal in their presence, they used to reply that it could not sting him, but would them."

Kirby and Spence, Intr. to Entom. ii. p. 238.

590.

A Larva, smaller than the preceding, with a transverse row of very short spines on each segment; but the intermediate ones on the second and third are longer than the rest.

590 A.

A brown papilionaceous Larva from Demerara, five inches in length, bearing on each segment six or eight spines or stems, from half an inch to an inch in length, set round with smaller spines going off at acute angles. The spines on the extremities are the largest, and incline towards the centre of the body; the segments, which bear eight of these arborescent

appendages, are those which have no prolegs^a, viz. the fourth, fifth, tenth and eleventh, the additional two being situated on the ventral aspect of each of these segments in a situation analogous to that of the legs. The general aspect of this singular caterpillar is that of a minute pine-forest.

Donor, Thomas Keate, Esq.

591.

A Larva, smaller than, but apparently of the same species with, the preceding. The spines are most luxuriant on the anterior segments. Somewhat similar larvæ are figured in *Merian's Ins. Sur. pl. 25. 43.*

591 A.

A singularly beautiful white Larva from Ceylon, two inches in length; every segment, but the first and last, bears on its dorso-lateral aspects a spine or stem half an inch long, with a fringe of white shining hairs on each side.

Donor, Dr. John Davy, F.R.S. &c. 1821.

592. Larva of Bombyx Quercus, *Fabr.* Phalæna Quercus, *Linn.* The Oak-moth.

Fig. Roesel, *Ins. i. Pap. Noct. tab. xxxv. a.*

Hab. Europe.

593.

A Larva, five inches and a half in length, resembling in habit that of Phalæna quercifolia; but in this specimen the hair is confined to the lower margins of the body, a fasciculus shooting out in a radiated manner above each leg and proleg, and from similar situations in the apod segments.

593 A.

A fuscous Larva from Surinam; five inches in length; numerous white spots give it a shagreened appearance, and it is thinly scattered over with black stiff hairs; tufts of long silken yellow hairs arise from each segment immediately above the legs and prolegs; and a fringe of the same kind of hair projects from the front of the anterior segment, and overhangs the head.

Mus. Leverian. lot 3248.

594.

A broad-bodied Larva, three inches in length, thickly clothed with long white silken hairs. See *Merian, Ins. Surin. pl. 16.* Kirby and Spence, *Intr. to Entom. ii. p. 227.*

^a See Kirby and Spence, *Intr. to Entom. ii. 288; iv. 353.*

595 J. B. A small white naked Larva, with a conical tubercle at the lower part of the sides of each segment.

596 J. B. A small hairy Larva with an anal process, probably of a Hawk-moth.

597. Chrysalis of a Moth remarkably downy.

598. A Poplar-leaf, with the Web and Chrysalis of some Lepidopterous insect attached to it; and an Ichneumon.

599 J. B. A Lepidopterous Larva, three inches and a half in length, with fasciculi of bristles arranged transversely on each segment, included in a dark-brown oval cocoon of a very thin texture, like gauze.

600. A Lepidopterous Larva, with its pupa-case, the top of which is cut off; the latter is of a dense texture, about the thickness of parchment, of a light gray colour, and with a shining exterior surface.

601 J. B. Pupa and Case of a Coleopterous (?) insect. The case is composed of fragments of wood, and is attached to a portion of Pine.

ORDO DIPTERA. ANTLIATA, *Fabr.*

(*Tipulidæ.*)

602. *Culex pipiens*, *Linn. Fabr.* The Common Gnat.

Fig. Swamm. Bibl. Nat. *tab.* xxxi. *fig.* 4—8; *tab.* xxxii. *fig.* 1—5.

Hab. Europe, in marshy places. "Insectum pipiens continuo susurro puncturaque molestissimum, aves imprimis aquaticas sustentat. Mas antennis pectinatis vix pungit." *Fabr. Syst. Entom. p.* 800. *no.* 1.

The glass contains larvæ and pupæ of this species.

(*Tabanidæ.*)

603. *Tabanus autumnalis*, *Linn. Fabr.*

Hab. Europe.

(Æstridæ.)

604. Æstrus Bovis, *Fabr.*

Fig. Reaum., *Ins.* iv. p. 503. *pl.* 38.

Hab. Europe: depositing its eggs under the skin of the Ox.

The specimen appears to have been excluded from the pupa-case only a very short time.

605. Æstrus Bovis.

A small portion of the skin of an Ox with two cysts, one containing a larva, the other empty.

606. Æstrus.

A portion of skin of the Ox or Rein-deer, in which are some cysts of Æstri. One of them is laid open on its external, another on its internal aspect.

607. Æstrus.

A section of skin containing the cysts of Æstri with larvæ.

608. Æstrus Equi, *Linn. Clark.* *Gasterophilus Equi, Leach.*

A portion of the stomach of a Horse with numerous larvæ or botts of different sizes.

609. Æstrus Equi.

A similar specimen, in which the botts have acquired their full growth. In these the circle of small spines at each segment are very distinct; they materially influence the progress of the larvæ through the alimentary canal. See the Article by Mr. Bracy Clark in *Linn. Trans.* iii., republished under the title "An Essay on the Botts of Horses and other Animals," 1815.

609 A. Æstrus Equi.

Clusters of botts adhering to the inner surface of the stomach of a Horse.

Donor, Mr. Clift, 1807.

609 B. Æstrus Rhinocerotis.

Two larvæ or botts from the stomach of a female Rhinoceros. The largest is fifteen lines in length, and they are more abruptly truncated at their posterior extremity than the larvæ of Æstrus Equi.

Donor, Sir Everard Home, Bart.

609 c.

Several small larvæ, about six lines in length and half a line in breadth, from the human frontal sinus; their intestines are of a dark colour, as if filled with coagulated blood; from their habitat they are probably allied to the *Æstri*.

Donor, Martin Mangles, Esq.

609 d. Larvæ, very similar to the preceding, which were voided *per anum* (*humanum*).

Presented to Joshua Brookes, Esq. by A. Copland Hutchinson, Esq.

Mus. Brookes. Catal. p. 105. no. 36 æ.

(*Syrphidæ*.)

610. *Helophilus pendulus*, Meigen. *Syrphus pendulus*, Fabr. *Syst. Entom.* 763. no. 7. *Musca pendula*, Linn.

Fig. Reaum., Ins. ii. *pl.* 34. *fig.* 9. 11.

Hab. Stagnant waters.

The larva is suspended by its tail, "which is composed of a double tube, the interior of which is very slender, extensile at the pleasure of the animal to a vast length, and terminated by a very small spiracle. The length of the tube is therefore varied according to the greater or smaller depth at which the insect chooses to continue; the tip reaching to the surface in order to supply the requisite quantity of air." *Shaw's Zoology*, vi. *part* ii. *p.* 381.

611. Larva of *Helophilus pendulus*.

(*Conopsidæ*.)

612. *Myopa buccata*, Fabr. *Conops buccatus*, Linn.

Hab. Europe.

Mas et fœmina in coitu.

(*Muscidæ*.)

613. Larva of *Musca vomitoria*. The Common Blue-bottle Fly.

(*Famil. dub.*)

614. Cell of the Pupa of some insect.

